ALS-7721

2CH H.264 Video Server

user manual

easy life high security

Thank you for purchasing the Alinking product.
To receive more complete service,
please register your product at
www.alinking.com

Version 2.3
Date: 2010.03.29

Firmware Version: 1.00

FCC Class A Verification

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void your authority to operate such equipment.

CE Class A

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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Introduction

ALS-7721 is a multi-functional 2CH H.264 Video Server. Unlike traditional video server, ALS-7721 has a built-in high power CPU and H.264 encode chip to provide users with a mechanism for the security or remote monitoring applications. ALS-7721 can support the high resolution real time image each channel (2CH D1 30FPS), and it can deliver triplex video streams simultaneously (Motion JPEG and H.264), allowing for optimization in image quality and bandwidth.

The product offers the many application function such as two-way audio, DDNS, samba, FTP, Mail, Multicast, QoS, blind detection, motion detection, privacy mask, event management and multi-level passwords for meeting user variety level of security needs.

This product is easy to install, convenient to operate.
ALINKING product is your safety partner.

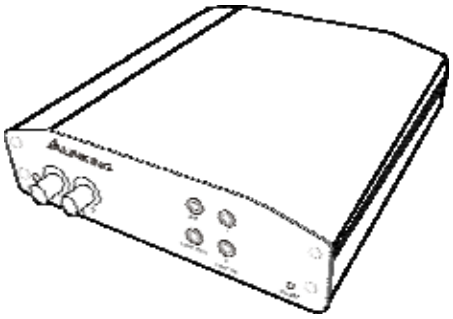
Features and Advantages

ALS-7721 can operate smoothly without the need to install additional software or hardware. All you need is a PC that is equipped with IE browser (6.0 or above) and connect the Internet Camera to the network to monitor the pre-set places remotely. ALS-7721 can provide you with protection of your personal, home, and property security.

- Resolution: NTSC - 704 x 480 ; PAL - 704 x 576 / 2CH D1 30 FPS
- Triplex Video Stream Simultaneously
- Dual Coding of the H264/MJPEG
- Mobile Phone View Support (WM6 / Symbian / Android / iPhone).
- 2 Way Audio (external MIC IN x 1, LINE IN x 2, LINE OUT x 1).
- Built-in smart detection (Motion / Blind) to monitor abnormal situations automatically and transmit real-time trigger command actively as preset;
- Built-in intelligent dynamic video detection for automatic monitoring of abnormal situations and sending a real-time trigger signal according to the active settings.
- Dynamic IP domain name support for use of the product at locations where fixed IP is not available
- User permission can be set based on different levels to ensure the security of the camera and protection of the property.
- The simple and clear design is suitable for airports, train stations, office buildings, large gymnasiums, warehouses, factories, shopping malls and schools.
- Support SD Card and external USB device connection.

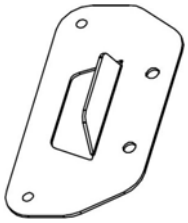
Packaging Contents

ALS-7721 is provided with the following accessories. Please contact your dealer if any one of the following is missing.



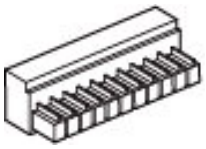
1. ALS-7721

2. 12V DC Power Adapter

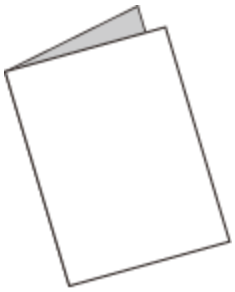


3. Bracket x 2

4. Screw x 4



5. Terminal x 2

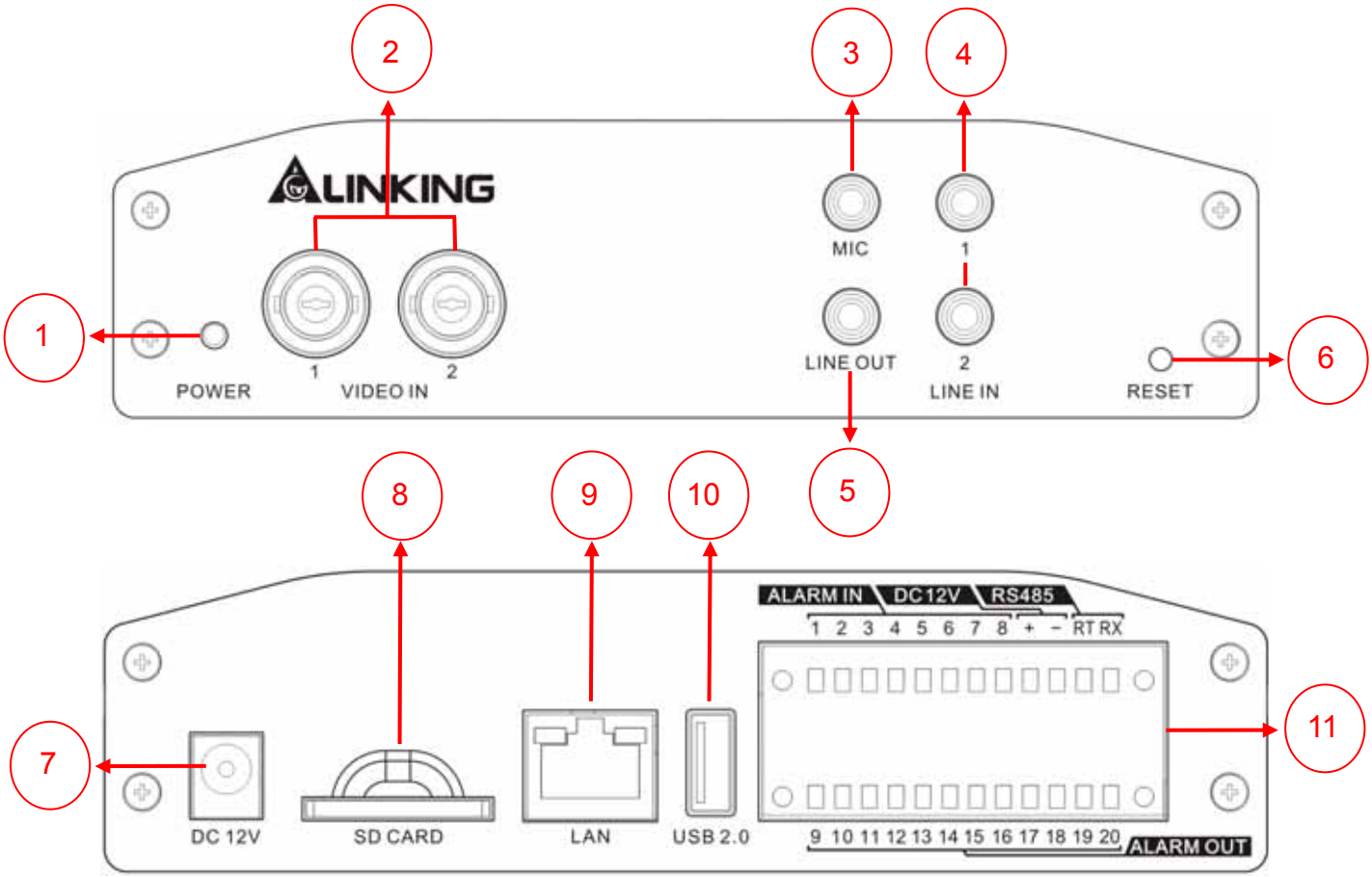


6. Quick Guide

7. CD ROM (Manual & Software)

System Instructions

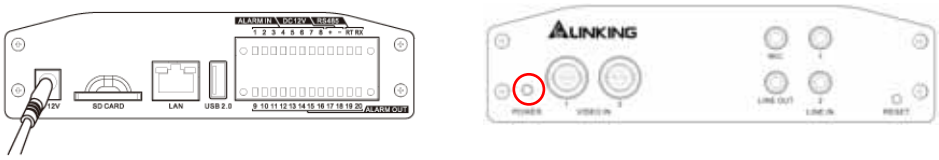
Wiring of the product



N.O.	Item	Illustration	Note
1	LED	Power LED	
2	VIDEO IN	2 x BNC Video Input Connection	
3	MIC IN	1 x External connect the Microphone	
4	LINE IN	2 x External connect the Line in audio device	
5	LINE OUT	1 x External connect the Speaker	
6	Reset	Reset Default Button	
7	Power	DC12V Power Connection	
8	SD Card	Standard SD Card Slot	
9	LAN Socket	10/100 RJ45 Network Connection	
10	USB	USB 2.0 Interface	
11	External Alarm	TTL Alarm & RS485 & DC12V Connection	

LED

The camera uses a high-luminance red LED to display the power information.



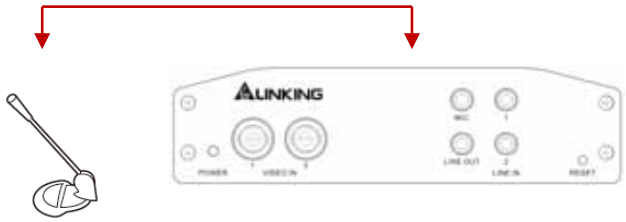
VIDEO IN

Plug the video source into the Video input to get the image.

NOTE：
The Video interface was used a BNC connector. If the camera does not use BNC, please consult your dealer or retailer to purchase or buy the adapter to use.

MIC IN

Connect a normal microphone with 3.5mm phone jack to the "MIC IN".



LINE IN

Connect the LINE IN devices s (e.g. MP3, DVD Player and Amplifier microphone) to the "LINE IN" socket. If ALS-7721 will be connected the normal microphone, it must gain the audio signal (Through the amplifier) before connected.

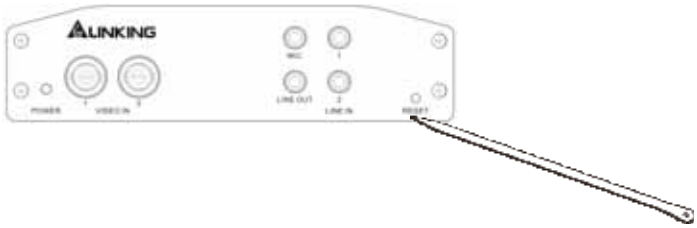
LINE OUT

Connect a audio devices (e.g. speaker) to the “LINE OUT” socket.

NOTE：
Two-Way Audio communication must be completed the MIC IN and LINE OUT connection

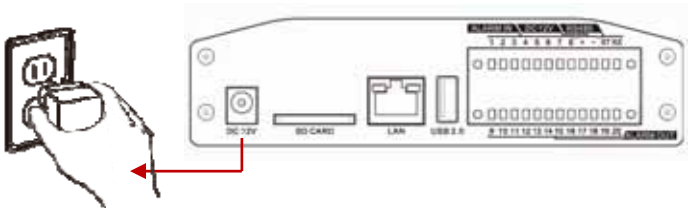
Reset (Button)

After turn on the machine, press in this hole for 5~10 seconds via a sharp object to reset to default settings.



Power

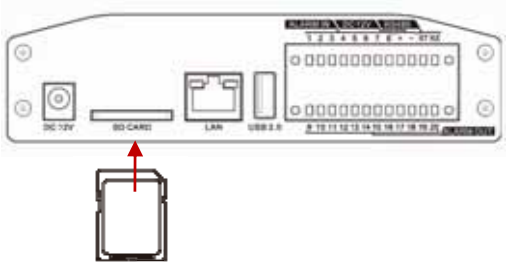
Please connect the product to a power supply from the DC Power Inlet. The power inlet of this product is non-polarized. The product can automatically determine the type of the incoming current.



Attention: Please take notice of connection of positive and negative electrode. Wrong connection will damage the camera.

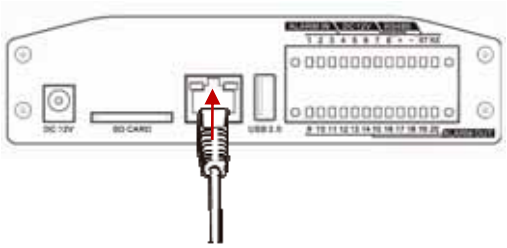
SD Card

ALS-7721 can support the SD Card and SDHC Card, and the storage range is from 2G~32G. ALS-7721 will detect the device automatically then it will display the information on **Setting > Basic Setting > Storage**.



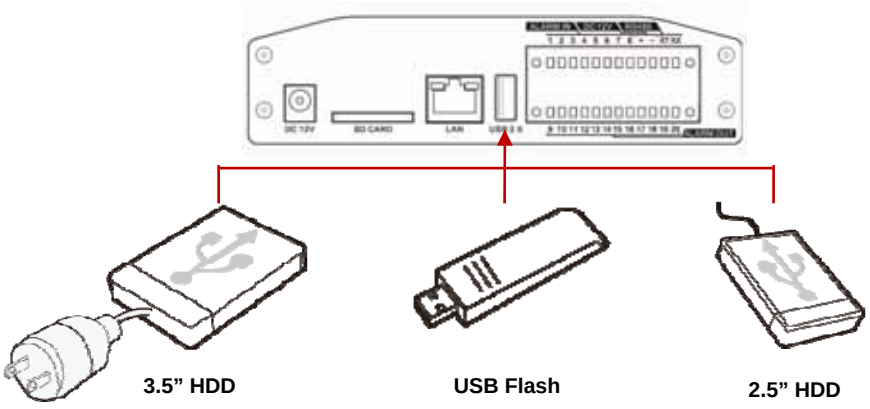
LAN Socket

Provide the Ethernet 10/100 base network speed, and insert the LAN cable in the LAN socket.



USB

This USB interface can support all USB storage devices from Market: USB flash driver, USB External 2.5 HDD and USB External 3.5 HDD. It can provide the little electric power for these USB drivers, so the USB External 3.5 HDD need to connect the external power by itself.

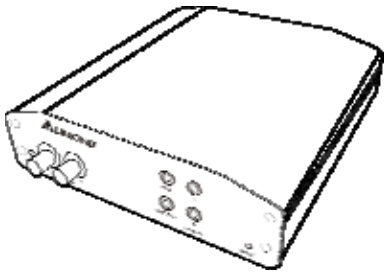


External Alarm & RS485

The external devices need to install the terminal first. It can help the external device installation. Please use the screwdriver to fix the terminal into external alarm & RS485. For more information about DI/DO and RS485, refer to **Attachment B.**

Hardware Installation

You can install the product on your desk or use the attached tripod to hang it from the wall or ceiling. (The product is provided with image flip function. Refer to the “Control Panel” for more information.)

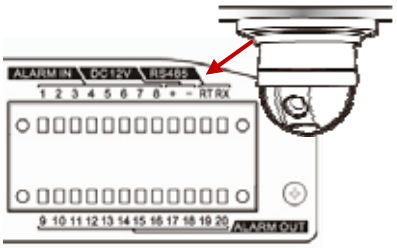


1. Connect to the Video In

Plug one end of the video source of your analog camera and connect the other end to your product. Connect one ~ four channels to ALS-7721 according to the requirement.

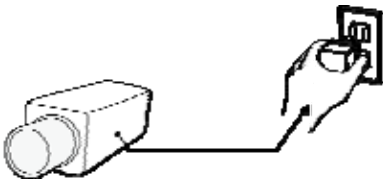
NOTE：

If the analog camera can be provided the Pan/Tilt/Zoom control, plug one end of your control cable in the RS-485 socket on the back of the camera and connect the other end to your product.



2. Connect to the power source for analog camera

Plug one end of the attached power cable in the power socket of your camera and connect the other end to the AC power source.

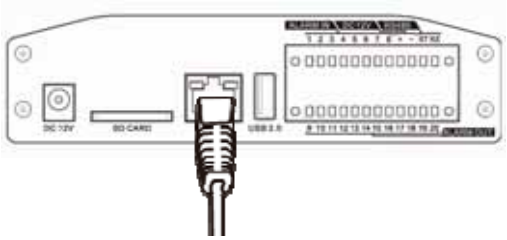


NOTE：

Make sure your analog camera uses BNC connectors for the video in/out. If not, please consult your dealer or retailer to purchase or buy the adapter to use.

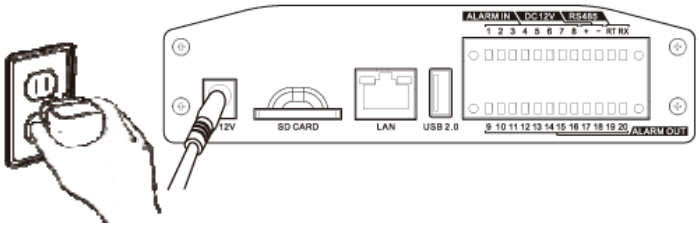
3. Connect to the LAN cable

Plug one end of your LAN cable in the LAN socket on the back of the product and connect the other end to the network that you want to access to.



4. Connect to the power source

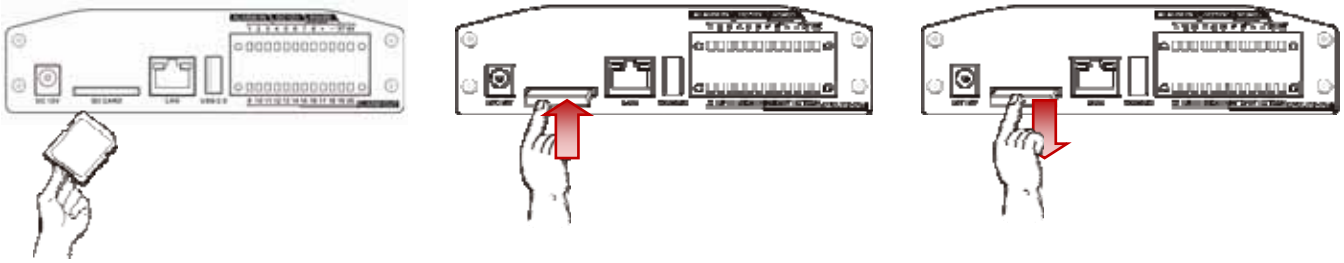
Plug one end of the attached power cable in the power socket of the product and connect the other end to the AC power source.



NOTE：
After connecting the product a power supply, please check the Power LED.

5. Insert the SD card (According to the requirement)

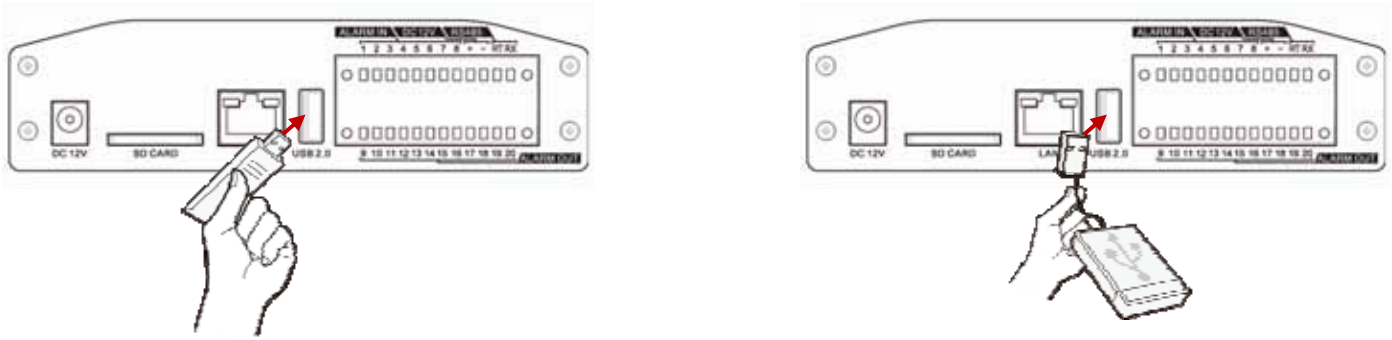
Check the SD Card direction (The Metal PIN need to toward the bottom) then insert the SD Card to ALS-7721.　Push the SD Card again to exit it.



NOTE：
Please note the Write-protect Switch of SD Card by yourself.

6. Insert the USB device (According to the requirement)

Check the USB interface direction then insert the USB device (e.g. USB Flash and USB HDD) to ALS-7721.

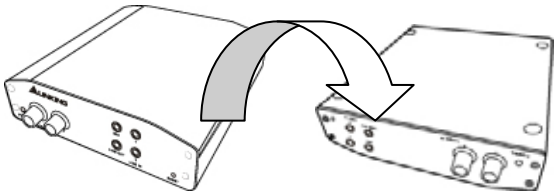


Bracket Installation

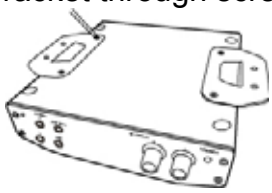
The product can be fixed on the wall (Fig. 1) or hung from the ceiling (Fig. 2).
When using the attached bracket and screws to fix the product. Please refer to the following steps:

1. Prepare the bracket

2. Reverse ALS-7721 then check the screw holes



3. Prepare the 4 screws to mount the bracket through screwdriver and screw.

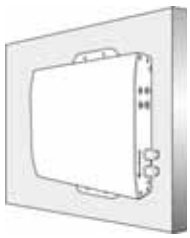


4. After install the all screw, reverse ALS-7721 to finish the installation.

Make sure that no steel bars or power cables exist behind the position where the product is to be fixed. Some walls or ceilings may not be strong enough to support the bracket and the product. Pay attention during installation to avoid injury that might be brought about due to falling of the product.

Attention: The horizontal angle is important when you hang the product from the ceiling. Excessive inclination may bring about abnormal rotation of the camera lens.

Fixed on a wall (Fig. 1)



Fixed on a ceiling (Fig. 2)

NOTE：
Product location: You can install the product on the holder and hang it on the wall or ceiling. Please do not install this product in locations of poor ventilation. This will result in poor operation.

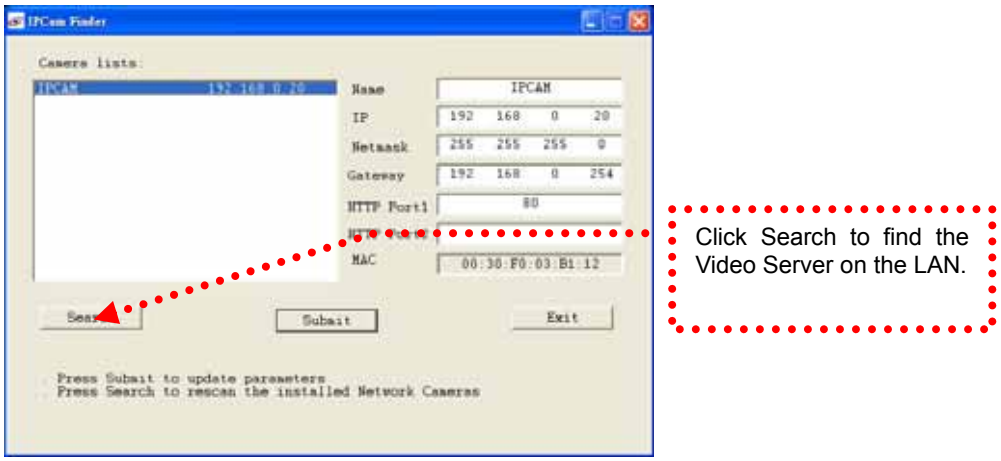
This product is not waterproof. Please install the product inside a waterproof case equipped with an arrestor when using it outdoors.

Camera Setting

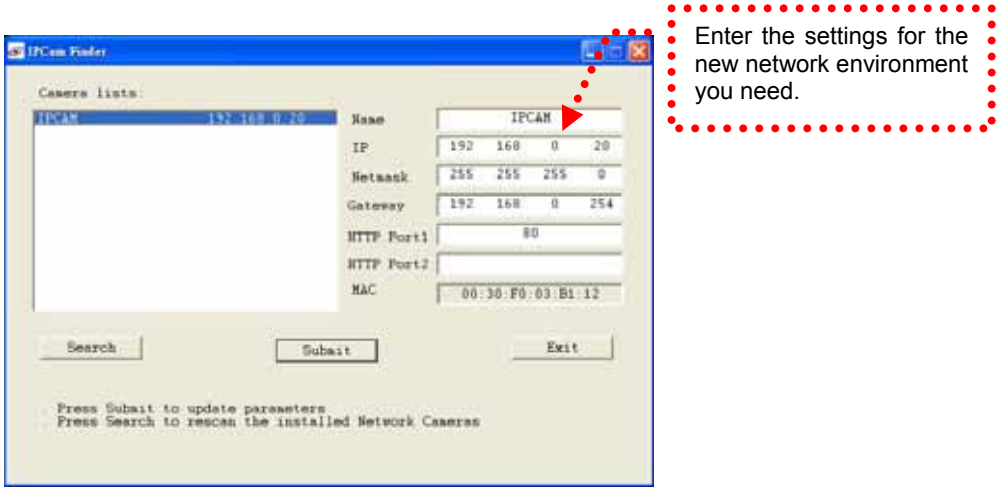
After the hardware has been installed, insert the attached CD in the computer and execute “IP Finder.exe” following the steps below to search and change the IP address of the camera.

NOTE：
If the network environment has the router, please make reference to the chapter of **Appendix D: Set up the Router Setting with the video server** for different environment description.

1. **Start the machine.**
   Execute the IP Finder.exe from the attached CD.
2. **Search the camera (Search)**
   Search the product from your LAN. The factory IP setting 192.168.0.20 appears on the screen.



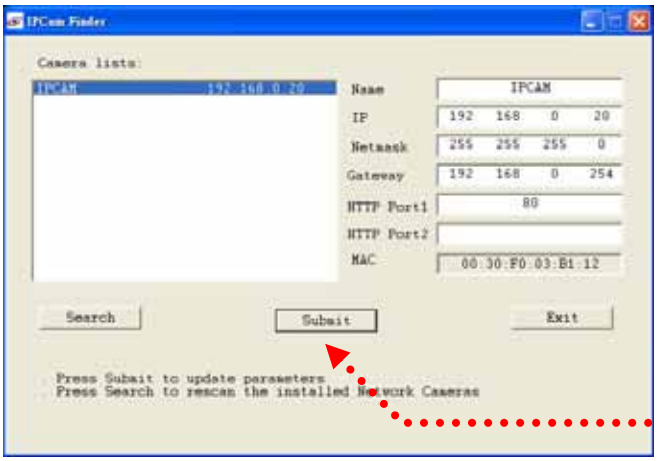
3. **Changing the IP address and related settings for the network environment**
   When you find the camera, click it and the settings appear on the right side. Change the settings for the new network environment you need.



NOTE：
You must enter new settings in the IP, Netmask and Gateway fields and keep the settings in other fields unchanged.

4. Submit data (Submit)

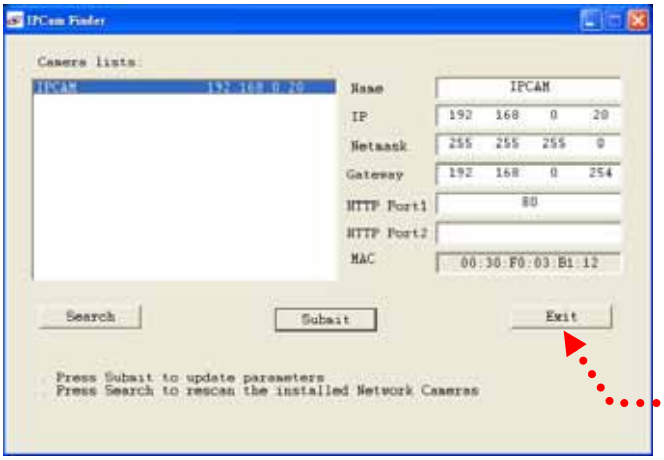
Click Submit to validate new settings.



3. Click Submit to validate new settings.

5. Confirmation

When all changes have been confirmed, click Exit to quit.



When all changes have been confirmed, click Exit to quit.

NOTE：

The IP FINDER can only find the IP addresses of the cameras that share the same hub on the LAN. For information about finding IP addresses on the Internet, refer to the “DDNS Setting”, or “UPnP Setting”.

All UIC camera/network server products can be found and changed using the IP FINDER software.

When the IP FINDER software cannot be executed, check your antivirus software or firewall to remove the block.

Field description: You can give a name to your camera (such as “Video_Server” or “Video-Server”). No spaces allowed (such as “PI IP”).

You can change the settings for IP, Gateway Address and Network Mask to meet the requirements of your network environment. The product uses HTTP Port1 and does not support Port2 settings.

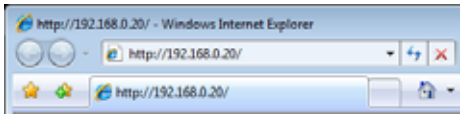
MAC: Factory default network identity of the machine.

Enter the Main Page

Open the web browser to login ALS-7721, please see the step by step illustration below:

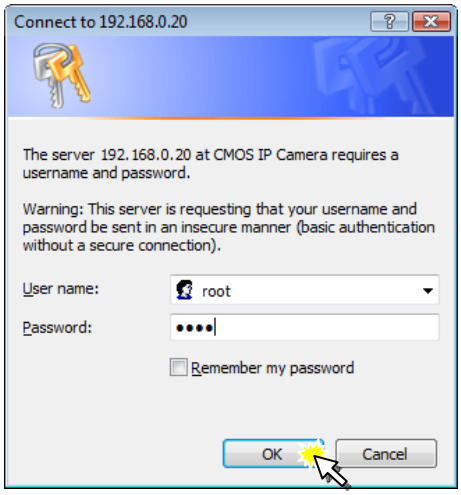
NOTE：
If the web browser cannot be display the Camera Main Page, please make reference to the chapter of **Appendix C: Change the Inter Explorer Setting** for further detailed description.

Open the IE browser and key in the IP address of the product.



When the login screen appears, key in "root" in the User Name and Password fields. Click OK.

User Name: **root**
Password: **root**



NOTE：
You can access the camera as an administrator by default and set up for other users or privileges from the “Basic Settings” -> “User”.

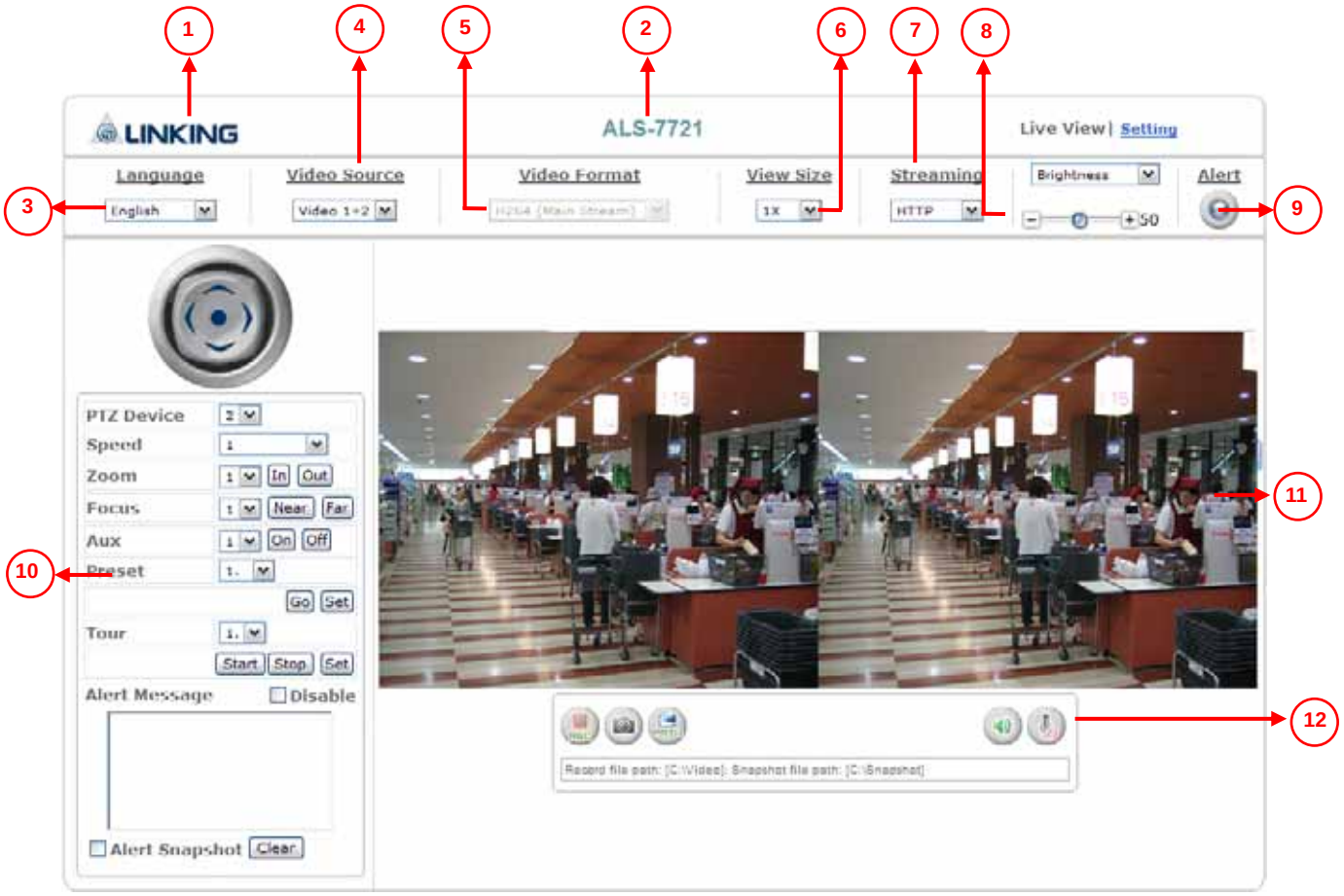
Installation of Internet Explorer ad-hoc components

When the username and password are confirmed, a control setup screen pops up under the IE address bar. Click “Install ActiveX Control” to install the controls.

The security warning screen appears. Click "Install". The ActiveX Control is named “ActiveX Control". This software is owned by our company and well certified. You can use it without any doubts about its validity.

When ActiveX Control is installed successfully, you can see the camera image and interface.

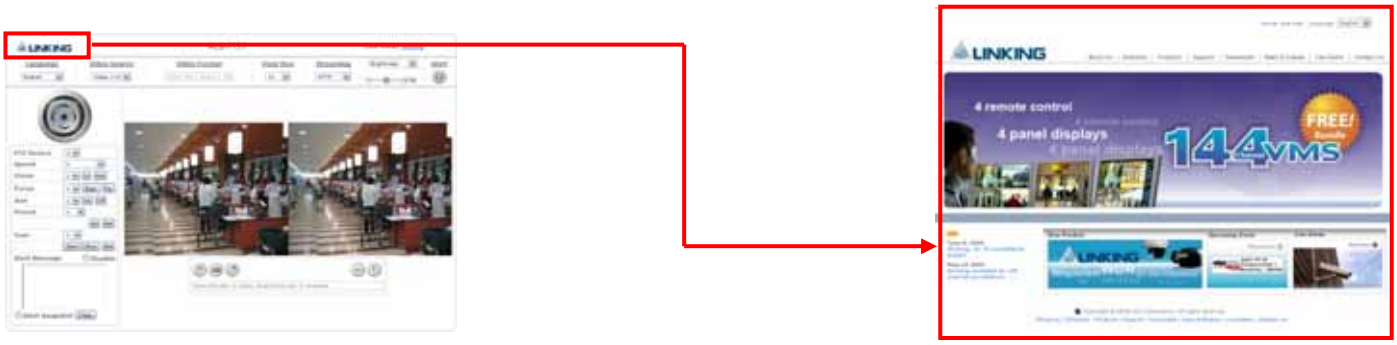
Camera Main Page



N.O.	Item	Illustration	Note
1	Logo	Display the company logo	
2	Product Name	Display the product name	
3	Language	Change the Language of Web browser	
4	Video Source	Select the video source	
5	Video Format	Provide all stream type	
6	View Size	Change the image size	
7	Streaming	Provide the HTTP/UDP/TCP protocol	
8	Color	Set up the color parameter	
9	Alert	Display the signal of alarm out	
10	Feature column	Provide the Alert Message/PTZ function	
11	Shortcuts	Provide the common function	
12	Shortcut Bar	Provide the main control function	

Logo

Display the company's logo of ALINKING then built-in the company's web link. Click the logo to link our company's web page.

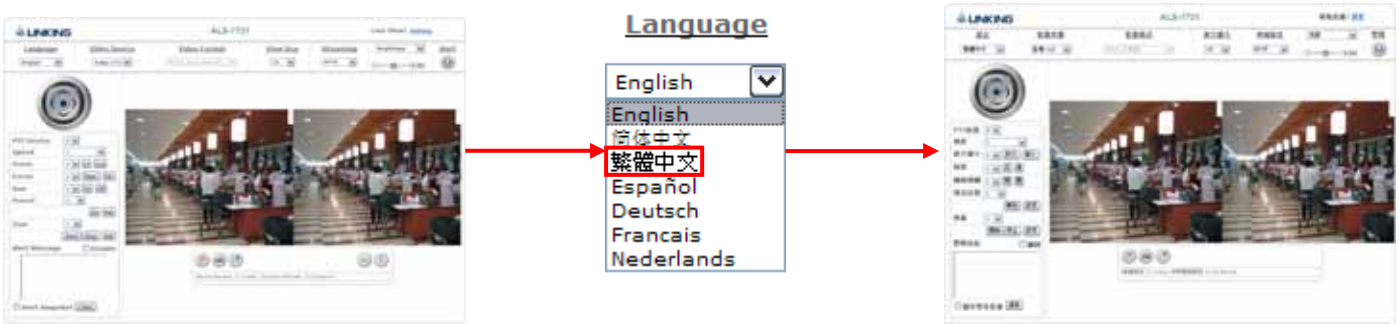


Product Name

Display the product name. The default name follows the product name, and it not releases the permissions of modification for customer.

Language

There are 7 kinds of language type for customer: English, 简体中文 (Simplified Chinese), 繁體中文 (Traditional Chinese), Español (Spanish), Deutsch (German), Français (French) and Nederlandse (Dutch). The default setting is the English.



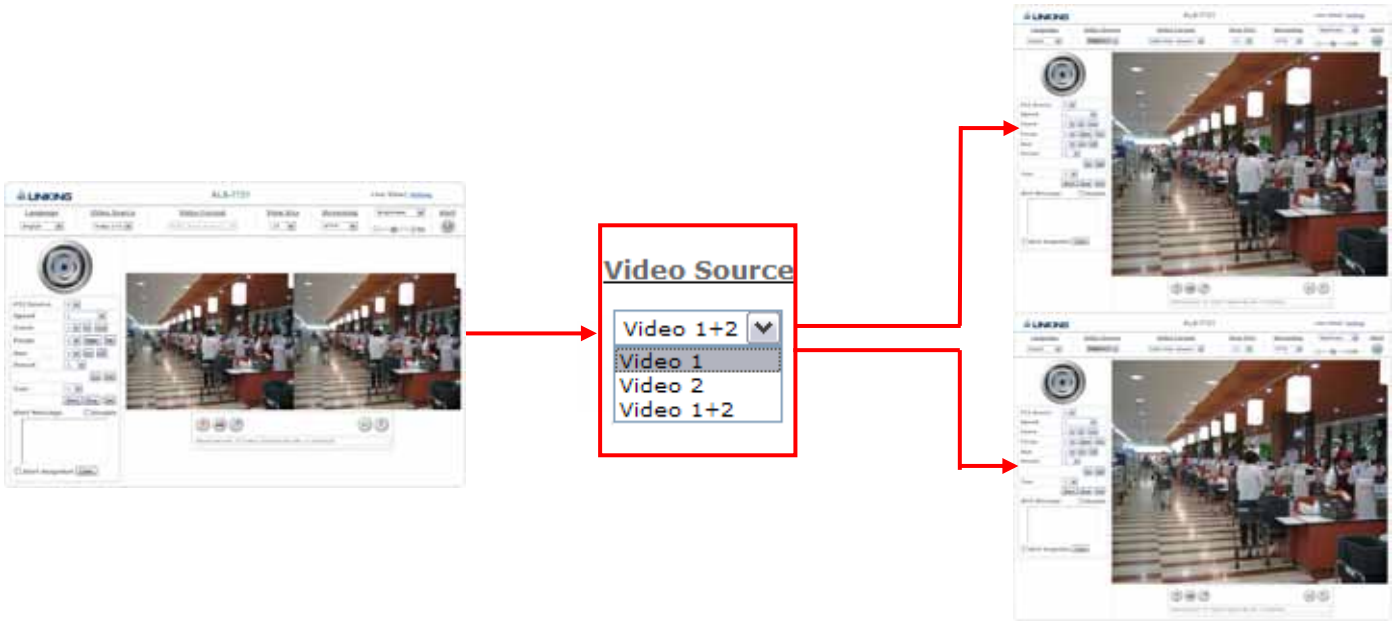
Click the pull-down menu to select the language then transfer the language of web page.

NOTE：
The Language will not affect the function of Shortcuts, because the Shortcut language follows the OS language.

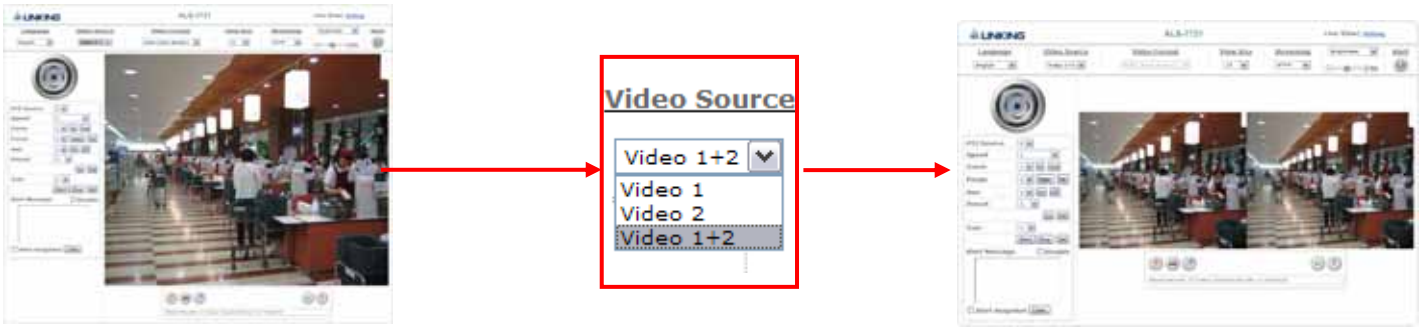
Video Socure

Select the video source to change the live view mode: Signal Channel (Video 01~02) and Dual Channel (Video 1+2).

Signal Channel:
Display the separate channel 01~02



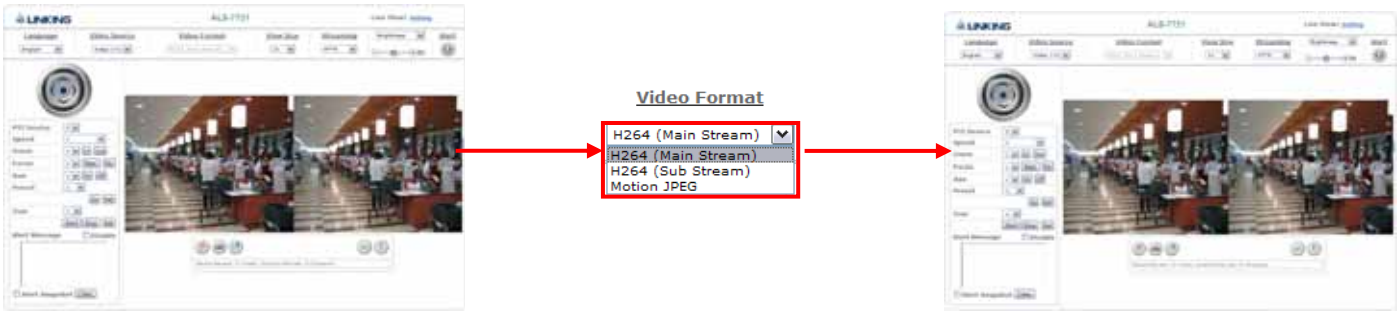
Dual Channel:
Display all channel in the same time.



Video Format

ALS-7721 can provide the triplex streaming for customer application, but the live view can only select one streaming to use. The default setting is the H.264 (Main).

Video Format
H.264 (Main)
H.264 (Sub)
Motion JPEG



View Size

The function will fix the resolution to enlarge/reduce the live image. There are 4 kinds of size for customer: 1/2X, 1X, 2X and 4X.

1/2X

1X

2X

4X

NOTE：
When you enlarge the View Size, the image quality will become to poor.

Streaming

There are 3 kinds of different streaming protocols including UDP, TCP, and HTTP. Set up the streaming protocol to apply or integrate on different requirement and environment.

Differences / Protocol	Tunneling	Pocket Loss	Speed
HTTP	Easy	Fair	Fair
TCP	Fair	Lower	Fast
UDP	Hard	Lowest	Fastest

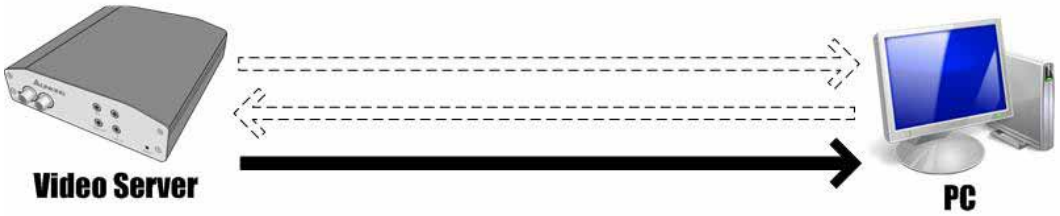
UDP

Provide the fastest but most unreliable transmission service. Video steams are transmitted through RTP 50000~60000 Port to ensure the fastest image transmission.

NOTE：
However, video fragment or mosaics may occur due to poor transmission quality.

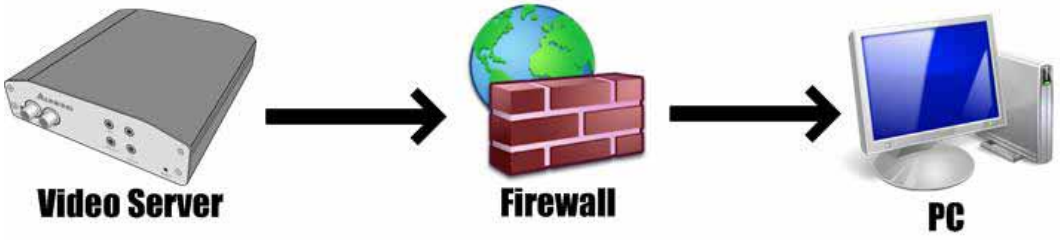
TCP

Provide reliable data transmission, because the transmission will check the receiver first. Video streams are transmitted through RTSP 554 Port to avoid video fragment or mosaics, but this protocol will affect the FPS to reduce.



HTTP

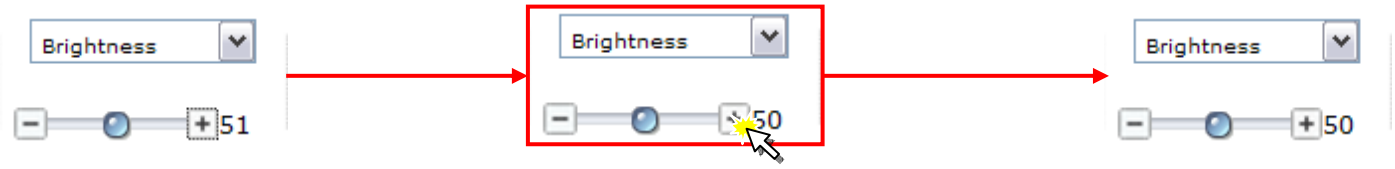
Video streams are transmitted through HTTP 80 Port to ensure passing through firewalls.



NOTE：
HTTP is recommended if your network is protected with firewalls.

Color

Adjust the color setting of live image by Brightness, Hue, Contrast and Saturation. Select the item then click the + / - button to adjust the value.



NOTE：
Click “+” button which mean to increase the value of the selected item
Click “–” button which mean to decrease the value of the selected item.

You can also press the button then drag left or right to adjust the wide range of value.

Brightness

Adjust the brightness of image.

Sharpness

Adjust the sharpness of image.

Hue

Adjust the hue of image.

Contrast

Adjust the contrast of colors.

Saturation

Adjust the saturation of colors.

Set to default

Resets all color setting to default figures.

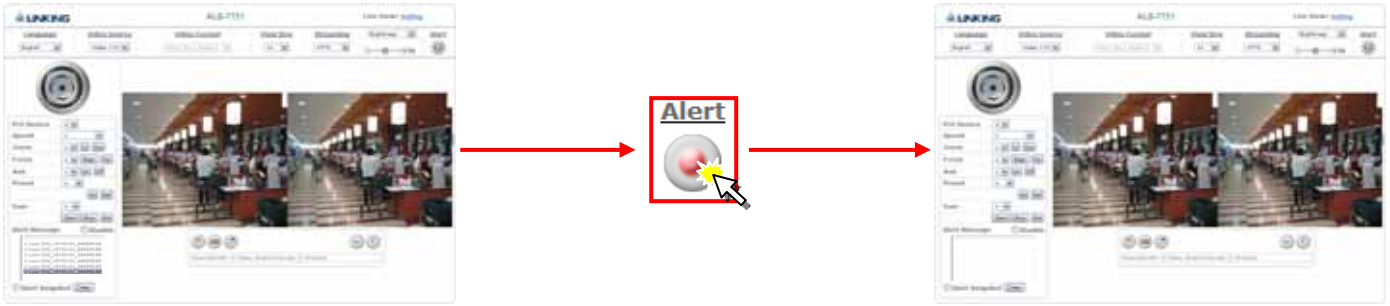
NOTE：
The default figures of color are 50, and the range is from 0 to 100. And the result would be change when you adjust the value.

Alert

When the event is triggered, the Alert light will change to red flash to warn the User immediately. The smart design can avoid the user loss the event.

NOTE：
The Alert Message will display the information in the same time.

The red flash of Alert light will keep flashing when you disable it. Click the Alert light again to disable the red flash state.



NOTE：
The function must need to combine with the event setting, please check the event device and setting is regular first.

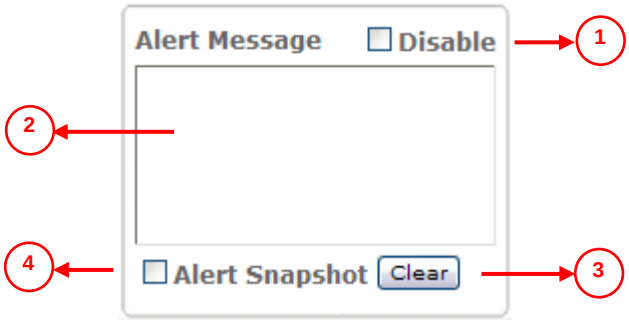
Feature Column

According to the different setting, the Feature Column will display the different application function including Alert Message and PTZ Interface.

NOTE：
If the PTZ function disable, the PTZ application disappear.

Alert Message

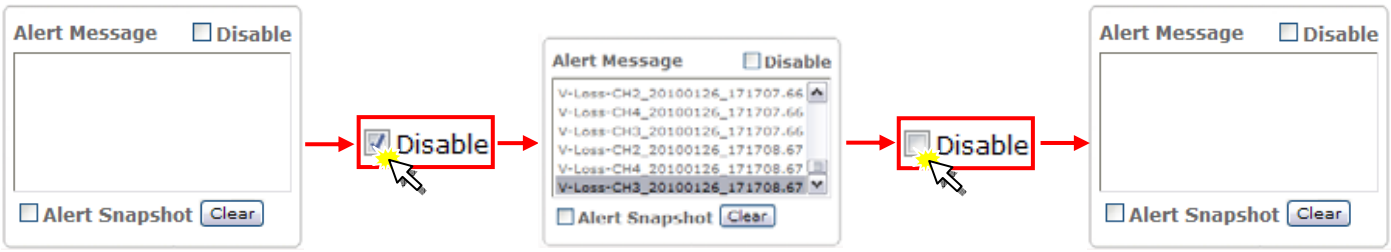
The function will receive the event message then display it. It provides the some control and application functions. Please see the detail illustration a below:



N.O.	Item	Illustration	Note
1	Disable	Enable/Display the Alert Message	
2	Alert Message Text	Display the event message	
3	Clear	Clear all event message from Text	
4	Alert Snapshot	Snapshot the image when alert trigger	

Disable

The function can hide the event message to display into Alert Message Text when the event is triggered. If the Alert Message Text had to record some event message before enable the Disable function, it will keep the old event information to add the new event message.



Alert Message Text

When the event is activated, the event message will display into the Alert Message Text. Please see the event message format as below:

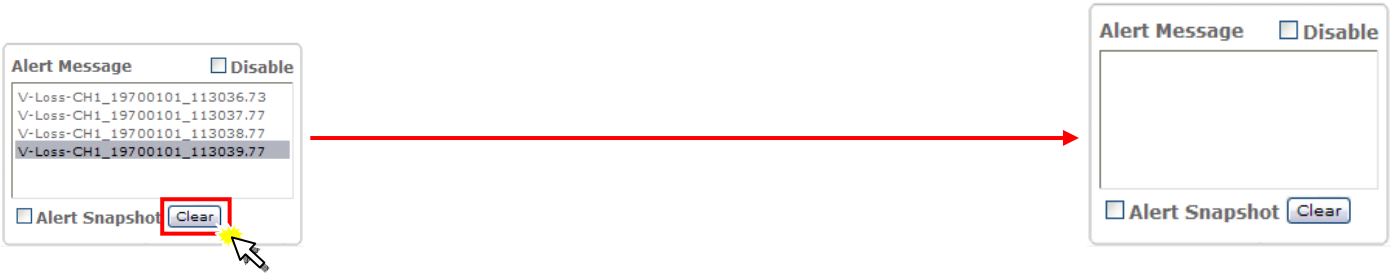
Event Type	Channel	Date	Time
V-Loss	CH1~2	MM/DD/YY	HH:MM:SS
Blind	CH1~2	MM/DD/YY	HH:MM:SS
Motion	CH1~2	MM/DD/YY	HH:MM:SS
Alarm	CH1~2	MM/DD/YY	HH:MM:SS

Double click the event message to pop-up the detail information for customer.

NOTE：
The different model has the different event types.

Clear

Click **Clear** button to remove all event message from the Alert Message Text.



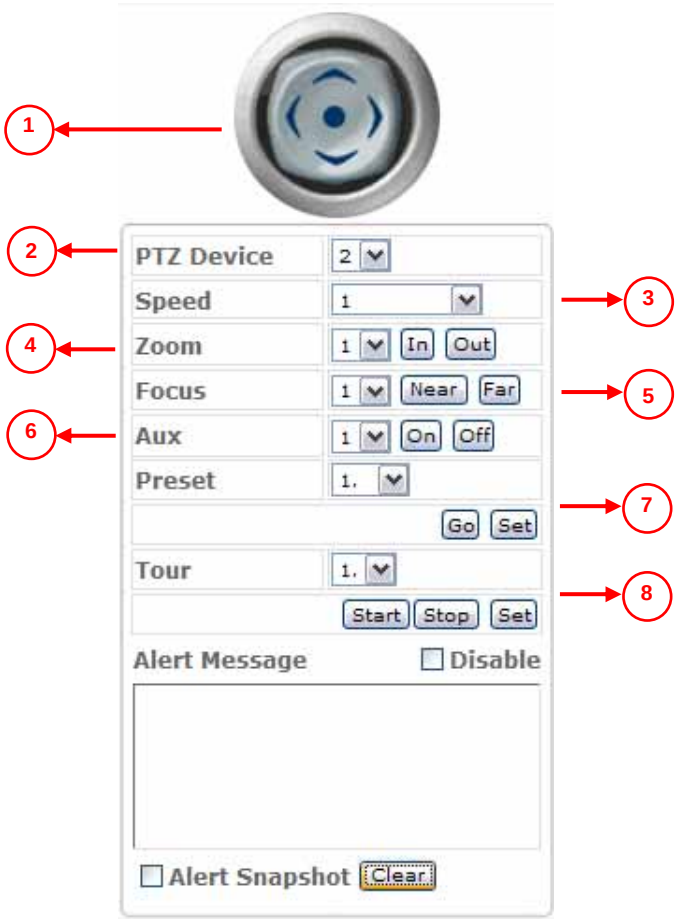
Alert Snapshot

The function will snapshoot the image when the event is triggered. The saving name will follow the Alert Message Text.

NOTE：
The saving path will follow the path setting from Shortcut Bar.

Control Panel

Control Panel will appear after enable the PTZ function. It provides the some control and application functions. Please see the detail illustration a below:



N.O.	Item	Illustration	Note
1	Camera Direction	Control the Pan/Tilt function	
2	PTZ Device	Adjust the Pan/Tilt movement speed	
3	Camera Speed	Adjust the Pan/Tilt movement speed	
4	Zoom	Control the Zoom IN/OUT function	
5	Focus	Use the manual Focus function	
6	Aux	Control the external device	
7	Preset	Set up/Enable the Preset	
8	Tour	Set up/Enable the Tour	

Camera Direction

Controls the direction of the camera (up, down, left, right, home position).

PTZ Device

Select the device to control the RS485 device, and the different device can set up the different protocol.

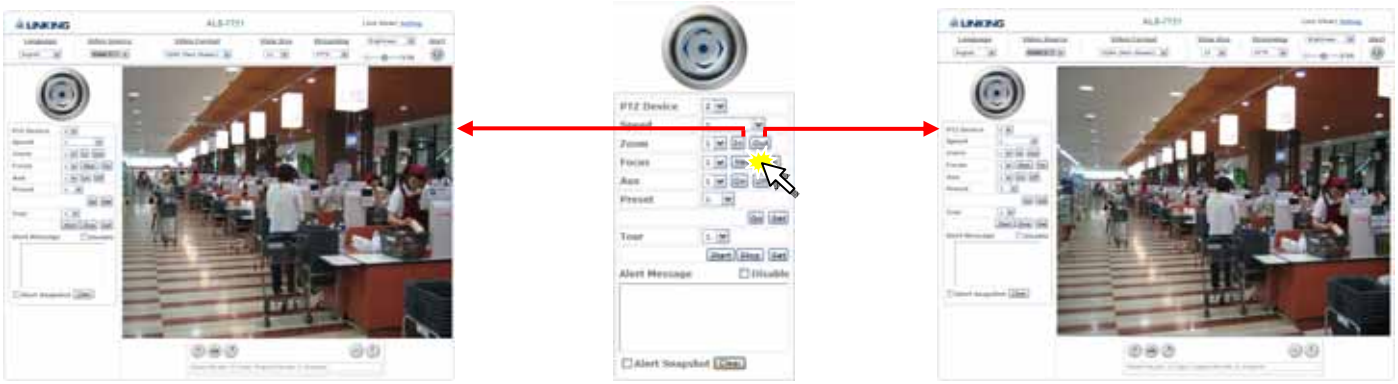
Camera Speed

Control the rotation speed of the camera from “1” (lowest) to “8” (highest).

Function	Parameter							
Speed	1	2	3	4	5	6	7	8
Angle/Sec.	3	20	40	60	80	100	120	140

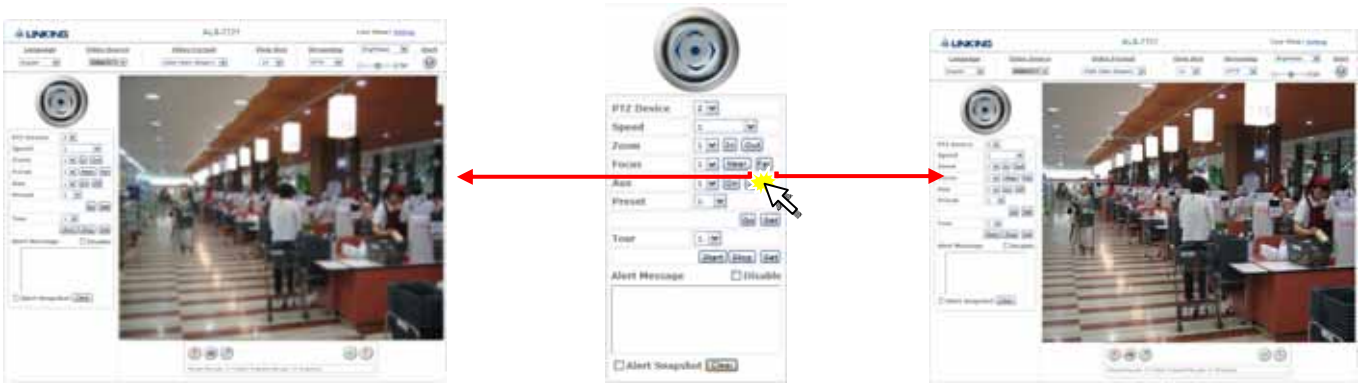
ZOOM

Click **In** or **Out** button to enable the optical ZOOM IN/OUT function. The ZOOM distance will follow the source device, and select the speed from “1” (lowest) to “4” (highest).



Focus

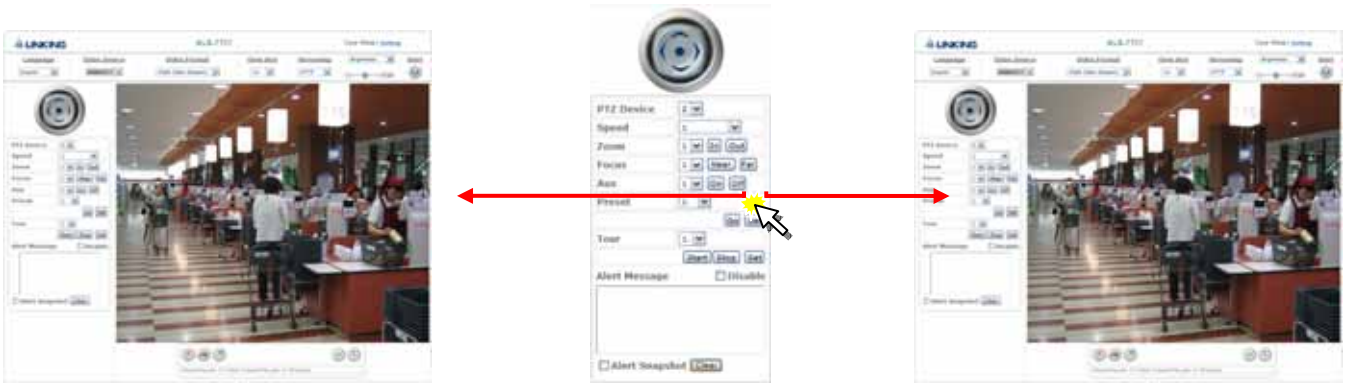
In the manual focus mode, choose **Near** or **Far** to adjust the focus, and select the speed from “1” (lowest) to “4” (highest).



NOTE：
Please check the Lens can support the application.

AUX

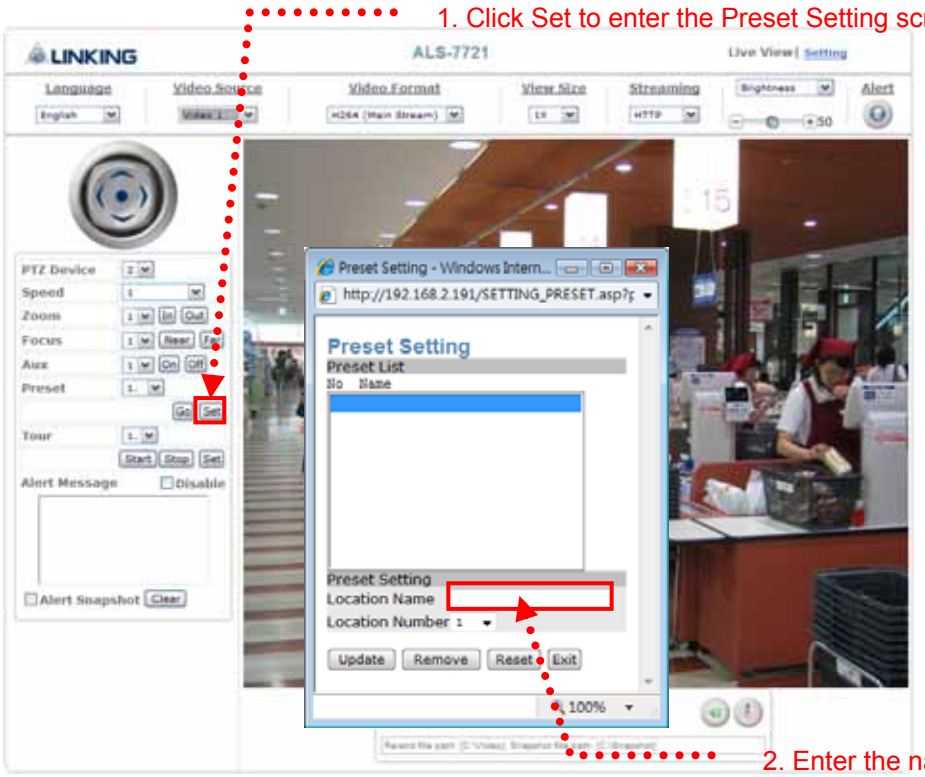
Control the external device through the RS485. Click **On** or **Off** to enable / disable the device activity, and select the device from “1” to “8”.

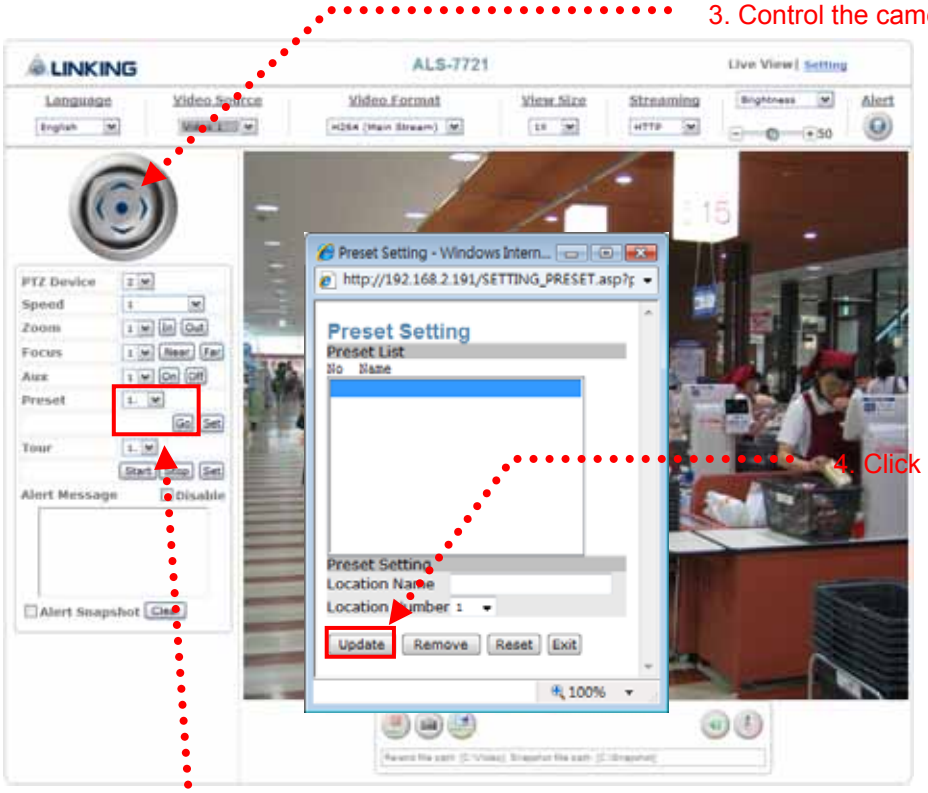


NOTE：
Please check the device can support the application.

Preset:

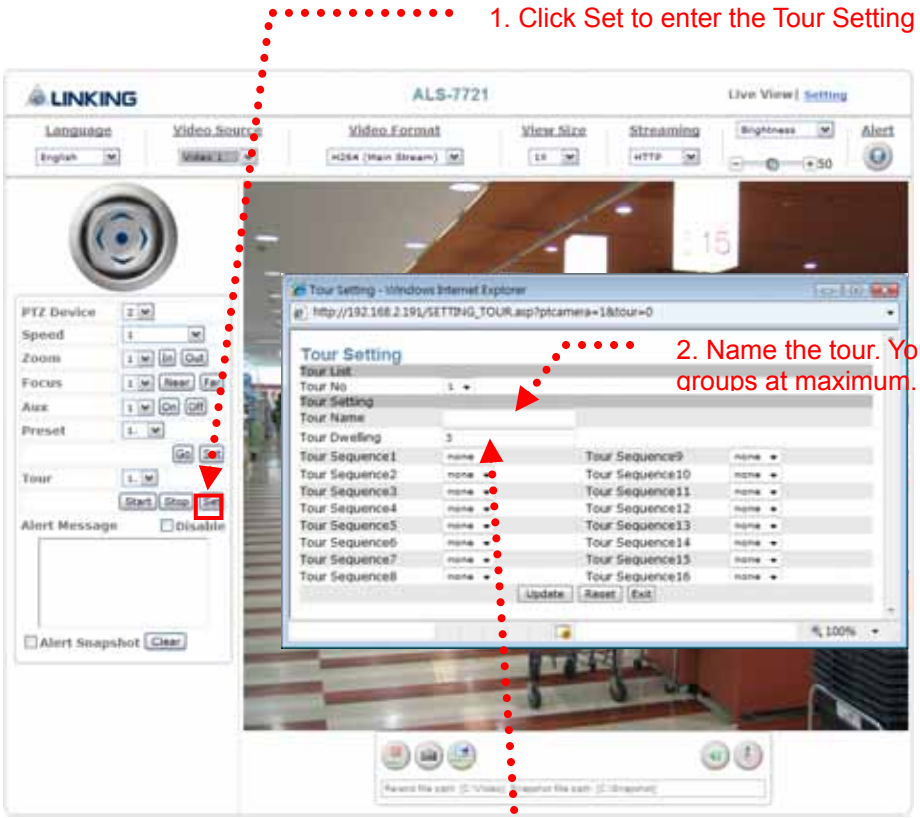
Preset the rotation points for the camera (16 points)

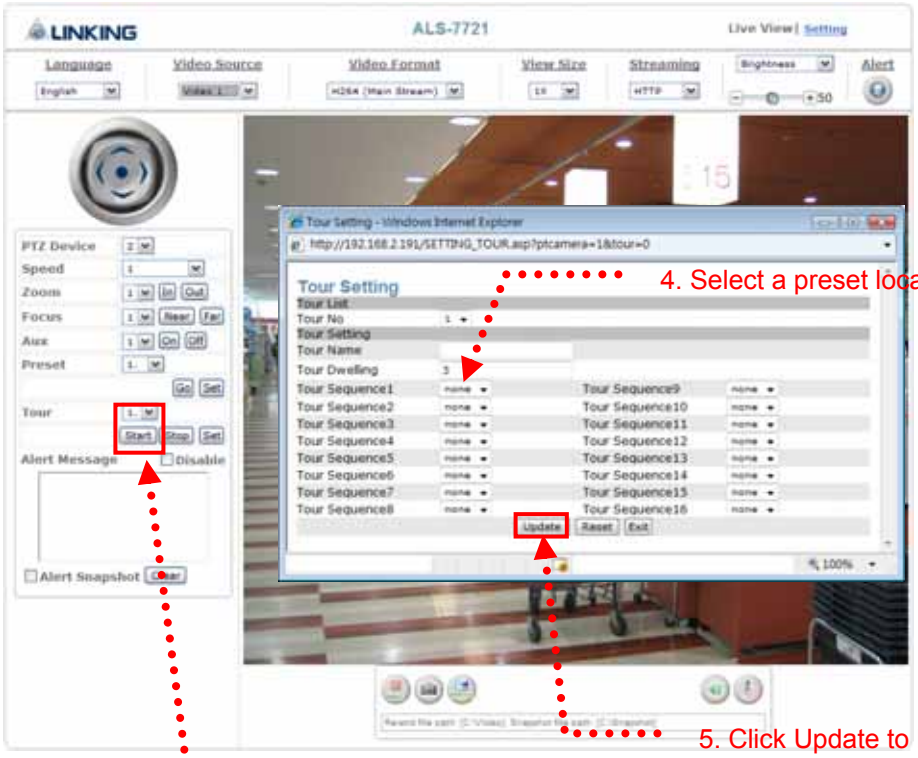




Tour

Enable/disable the tour mode of the camera. The rotation points of the camera must be set up in advance, and ALS-7721 provide five tour address to use it.





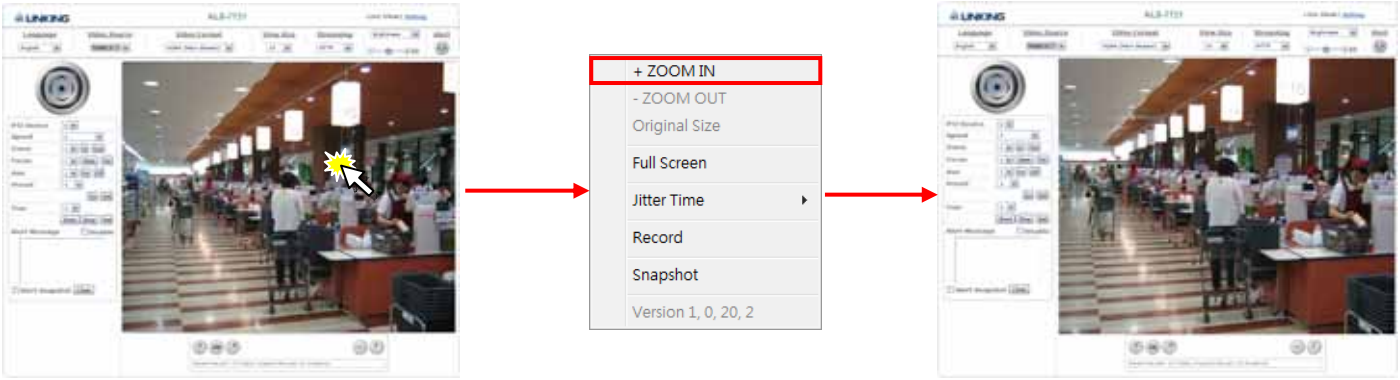
Shortcuts

Click the right-button of mouse from Live View to display the Shortcuts List. According to the requirement, select the application function directly. The detail function illustration as below:

NOTE：
The function can only be used each channel. It cannot control four channels in the same time.

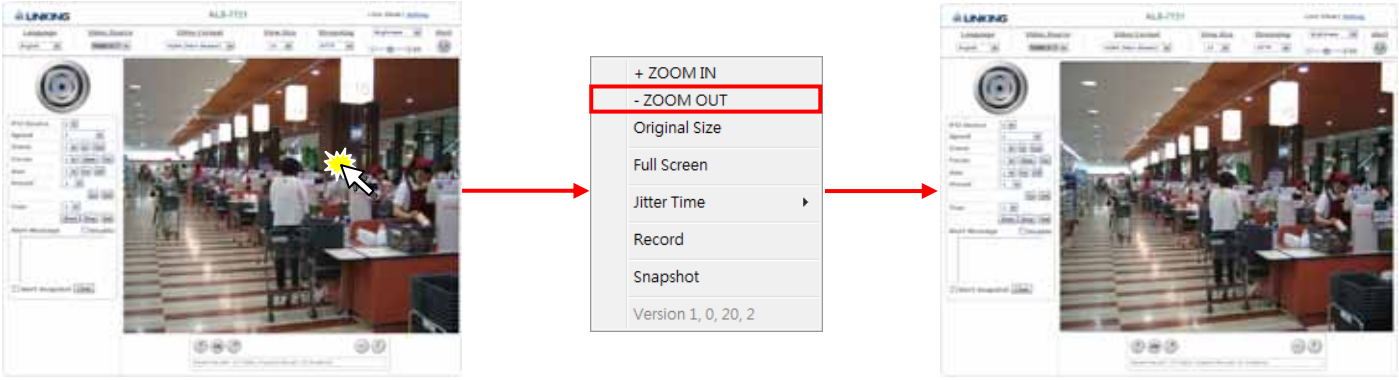
+ZOOM IN

The +ZOOM IN means the digital enlarge function which provides the x8 digital zoom. Click the right-button of mouse to enable this function.



-ZOOM OUT

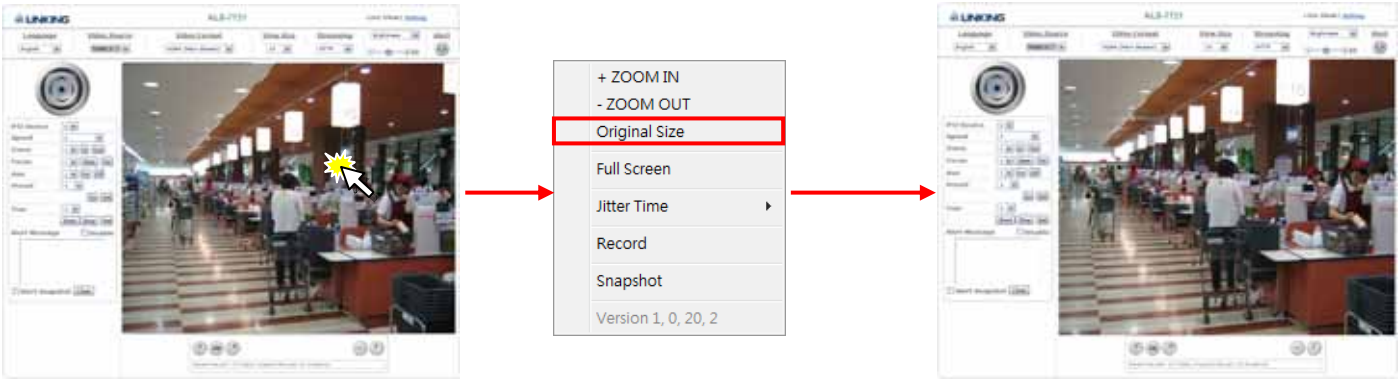
The -ZOOM OUT means the digital reduce function which provides the x8 digital zoom. Click the right-button of mouse this function.



NOTE：
Use the scroll wheel button of mouse to use the ZOOM IN/OUT function.

Original Size

No matter what the multiple of digital zoom, select the function to reset the original size. Click the button to enable this function.



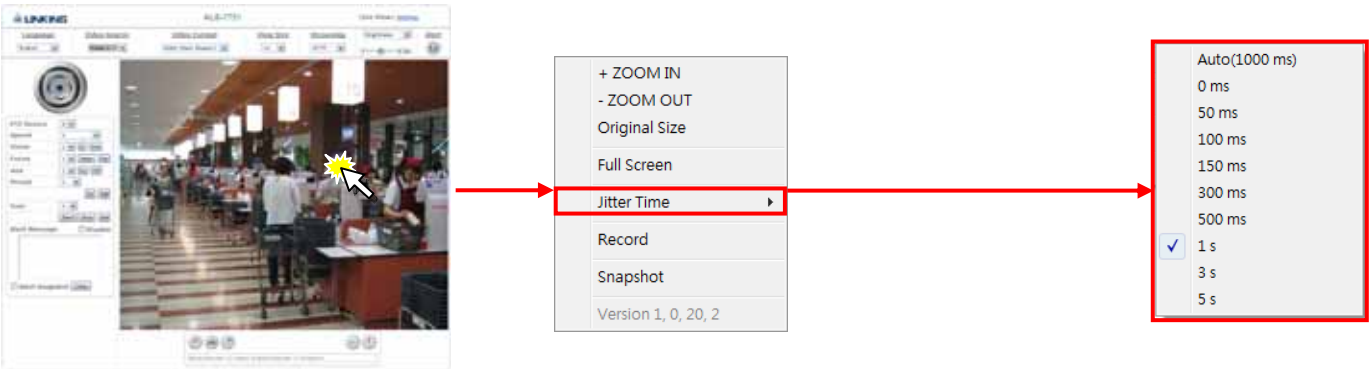
Full Screen

Let the channel to change the full screen. And select the function again to return the normal screen. You can also use “ESC” button of keyboard to return to one.

NOTE：
When the function enable, you can also use other shortcuts function.

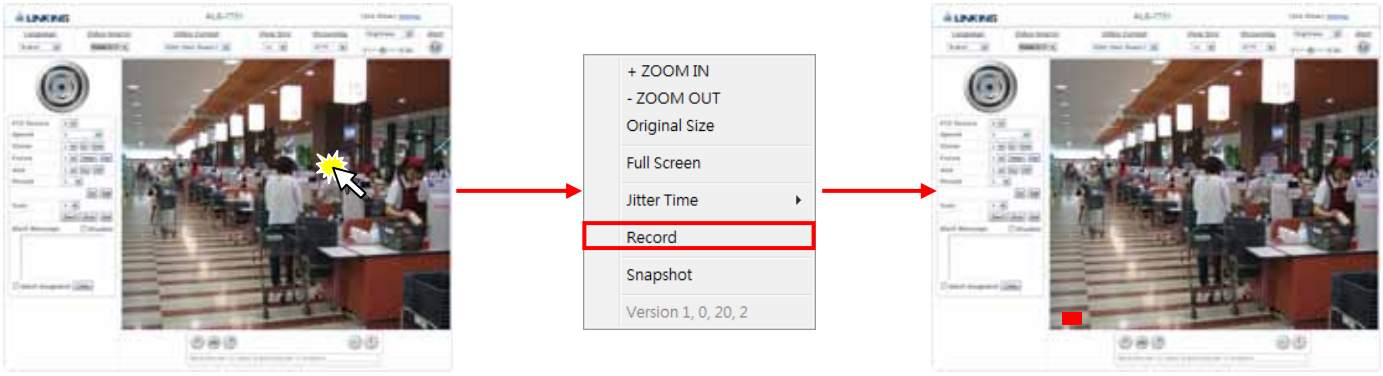
Jitter Time

This function can handle packet loss and packet re-ordering. You need to set up the buffer time which helps the video smoother. The setting is not the standard according to your bandwidth to adjust the buffer time. There are 7 kinds of parameters for customer: N/A, 150ms, 300ms, 500ms, 1s, 3s and 5s. If the jitter buffer time is highest, the image may appear the delay time. The default parameter is the 150ms.



Record

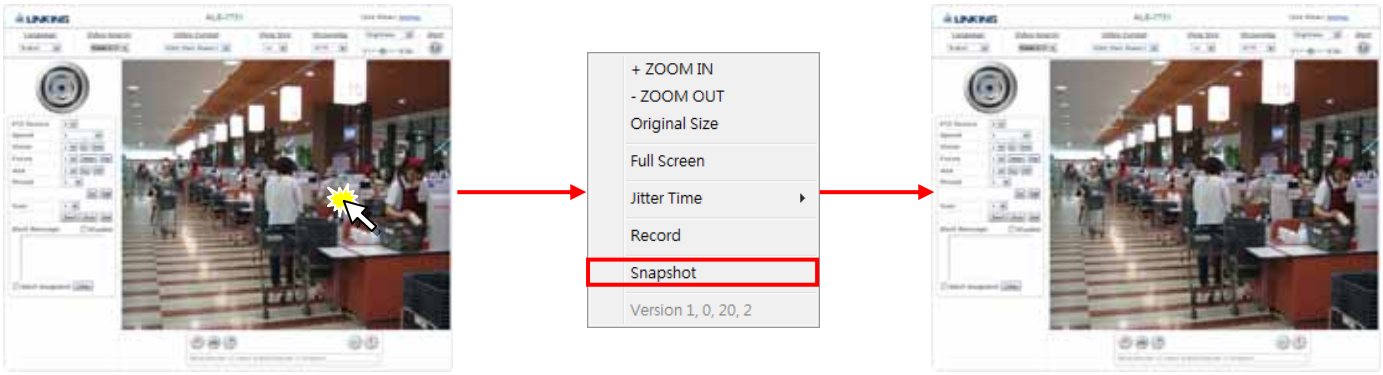
Select the function to record the image of ALS-7721 that saves to default path. Select record again to stop recording. When the function enable, the record icon of Shortcut Bar will change the status and the Live View image will display the red square signal in the bottom left corner.



NOTE：
Although this is the shortcut of recording function, it is the same with the Record of Shortcut Bar

Snapshot

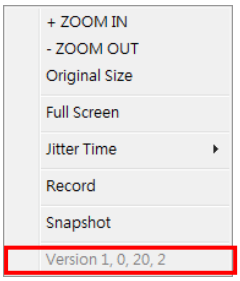
Select the function to snapshoot the image of ALS-7721 that saves to default path. When the function enable, the snapshoot icon of Shortcut Bar will flash the status.



NOTE：
Although this is the shortcut of snapshot function, it is the same with the Snapshot of Shortcut Bar

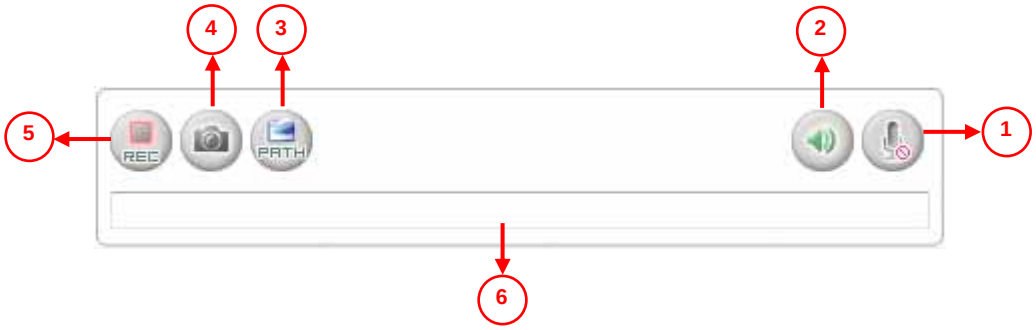
Version

The “Version” is the ActiveX Control version.



Shortcut Bar

Enable/Disable the application function from Shortcut Bar.



N.O.	Item	Illustration	Note
1	Microphone	Enable/Disable the microphone function	
2	Buzzer	Enable/Disable the buzzer function	
3	Path	Change the saving folder path	
4	Snapshoot	Snapshoot the Live View image	
5	Record	Record the streaming image	
6	Shortcut Bar Message	Display the record and snapshoot status	

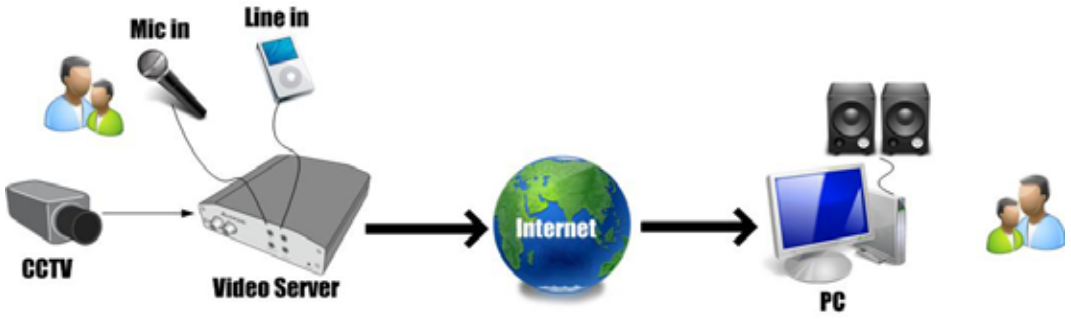
Microphone

The function can use the PC's microphone to transmit the voice into ALS-7721.

Click the button to enable/disable the microphone function which provides the application of one-way audio.

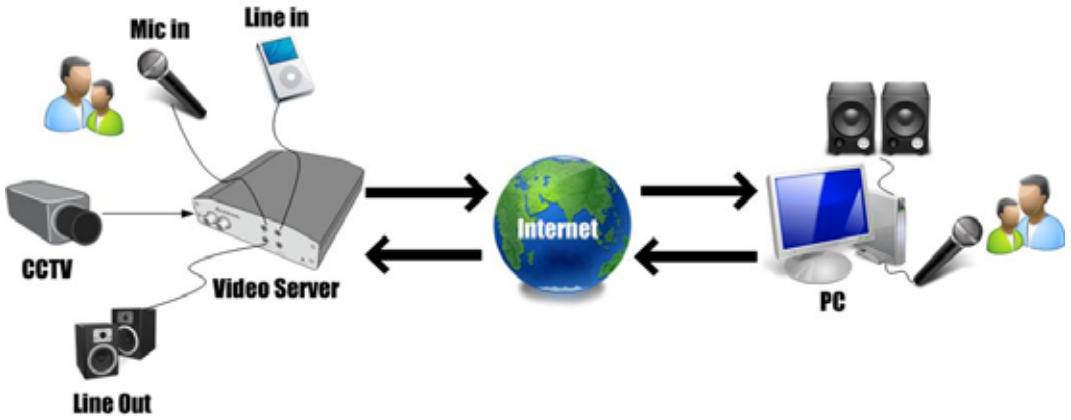
Buzzer

The function can receive the voice of ALS-7721's microphone or line in devices.



Click the button to enable/disable the buzzer function which provides the application of one-way audio.

If you want to achieve the two-way audio application, please enable the microphone and buzzer function in the same time.

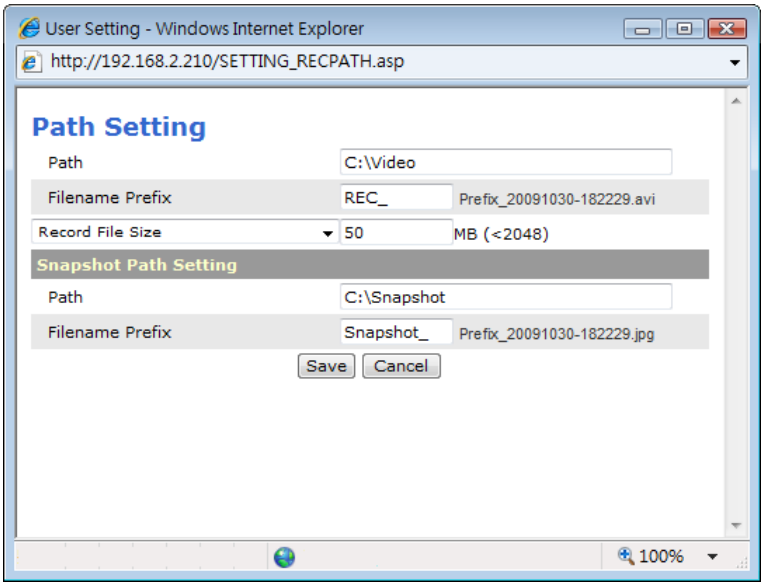


NOTE：
Adjust the audio parameter according to the audio of setting.

If the audio function disable, the Live View will also hide the audio ICON.

Path

The function includes the setting: Path, Filename Prefix and recording limit, please see the detail as below:



NOTE：
Due to the path setting will save the modification into ActiveX Control and the .ini file. No matter what the type of ALS-7721 change, the path will follow the same folder to save the image.

Path

Assign the recording to a folder. The image would be saving to the default folder. You can input other folder to save the image.

Function	Default Path
Record	C:\Video
Snapshot	C:\Snapshot

Filename Prefix

Set up the filename prefix by yourself, and the recording or snapshot image will follow the fixed format to save the file. The fixed prefix and format will be not modifying by user. Please see the detail information as below:

Type	Fixed Prefix	Prefix	Fixed format
Record	Cam1~2_	REC_	YY/MM/DD-HH:MM:SS.avi
Snapshot	Cam1~2_	Snapshot_	YY/MM/DD-HH:MM:SS.jpg

Record Limit

The function only supports the “Record Path Setting” then limit the record file size. ALS-7721 will follow the setting to create the recording image of fixed size. There are two kinds of setting for customer: “Record File Size” and “Record Duration”.

Record File Size

Record File Size 50 MB (<2048)

The default size is the 50 MB, and the limit is the 2048 MB.

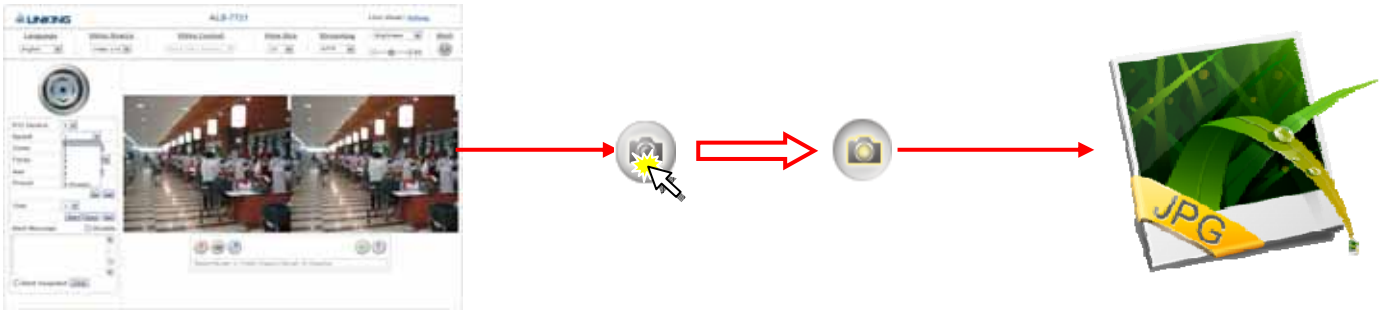
Record Duration

Record Duration 50 Seconds

The default duration is the 50 Seconds, and the limit is the 99999 Seconds.

Snapshoot

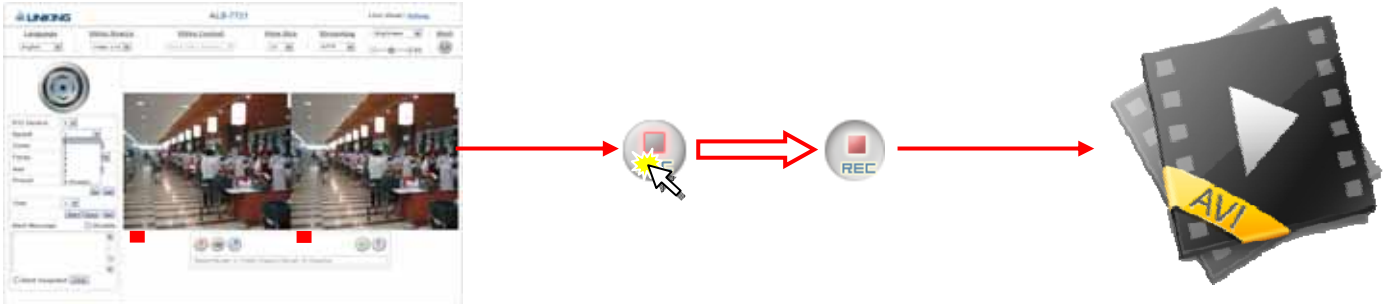
Click the button to snapshoot the image of ALS-7721 then saves to default path. When the function enable, the icon will flash the status.



Record

Click the button to record the image of ALS-7721 then saves to default path. When the function enable, the icon will change the status and the Live View image will display the red square signal in the bottom left corner.

The record function will detect the status of web browser. If the web browser closes suddenly, the recording image will keep the file completely.



NOTE：
If the video source is “QUAD”, the record and snapshot function will save all channel images in the same time.

Shortcut Bar Message

The function will display the information of record and snapshot for customer, please see the all status illustration as below:

Function	Illustration
Login	Record file path: [C:\Video]; Snapshot file path: [C:\Snapshot]

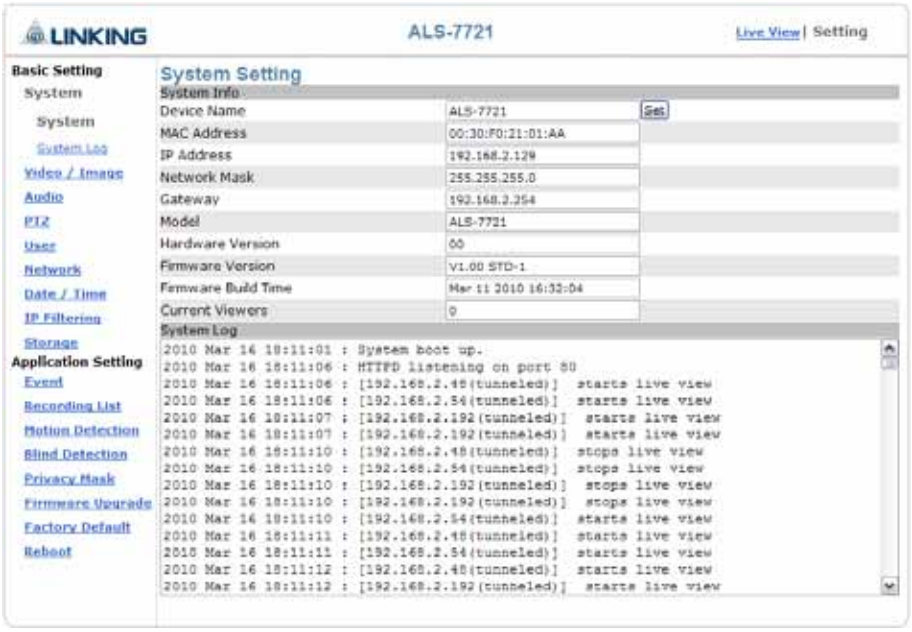
Function	Illustration
Record	Start recording to : C:\Video\Cam%_REC__%Y%m%d-%H%M%S.avi Recording to C:\Video\ Cam%_REC__%Y%m%d-%H%M%S.avi is stopped Fail to record: C:\Video\ Cam%_REC _%Y%m%d-%H%M%S.avi

Function	Illustration
Snapshot	Snapshot : C:\Snapshot\Cam%_Snapshot__%Y%m%d-%H%M%S.jpg has been saved. Fail to snapshot in path C:\Snapshot

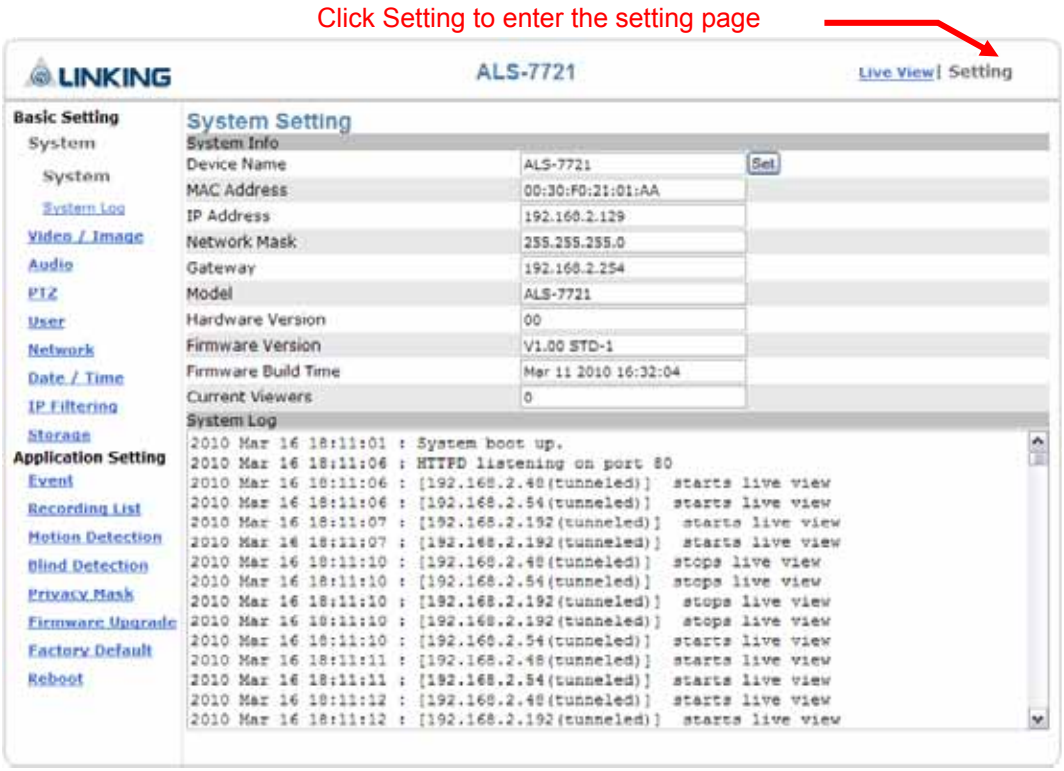
NOTE：
The setting of path and filename will follow the Path setting.

System setting

System setting contains basic and application settings. The basic setting is executed for basic system information, transmission speed, audio/video code, user authorization, date/time, and IP filter, while the application setting is executed for event triggering definition and other relevant settings, definition of the motion detection area, firmware update, reset to factory default, and reboot of the machine.



Basic Setting



Basic Setting > System

Basic Setting > System > System

■ **Basic Setting > System > System > System Info**

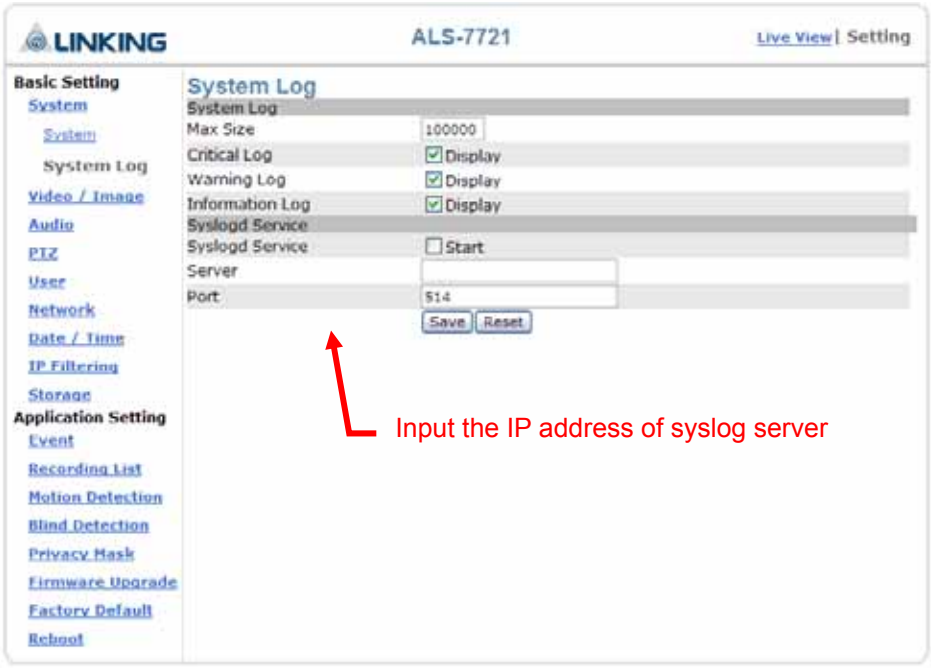
Device Name: You can set the name for your camera here. Click **Set** to complete the setting.
MAC Address, IP Address, Network Mask, and Gateway: Network information
Model: Display the product model name.
Hardware Version, Firmware Version and Firmware Build time: Firmware information.
Current Viewers: The number of viewers who are currently accessing the video stream.

■ **Basic Setting > System > System Log**

The administrator can view all login information of this camera, including boot record, video streaming mode, login IP, changes, and the date/time information. You can copy the entries to a Word document and save them manually. Please note that all information is deleted when you turn off the machine.

Basic Setting > System > System Log

This function can send log file to syslog server to monitor the situation of ALS-7721. You can download free software of syslog server from internet.



■ **Basic Setting > System > System > System Log > System Log**

Max Size: The numbers that log exist, the default is 100000.
Critical Log: The most important log file.
Warning Log: The medium level log file.
Information Log: The general log file.

■ **Basic Setting > System > System > System Log >Syslogd Service**

Syslogd Service Click start to send log to server.
Server: The IP address of syslog server.
Port: Set the port number.

Basic Setting > Video/Image

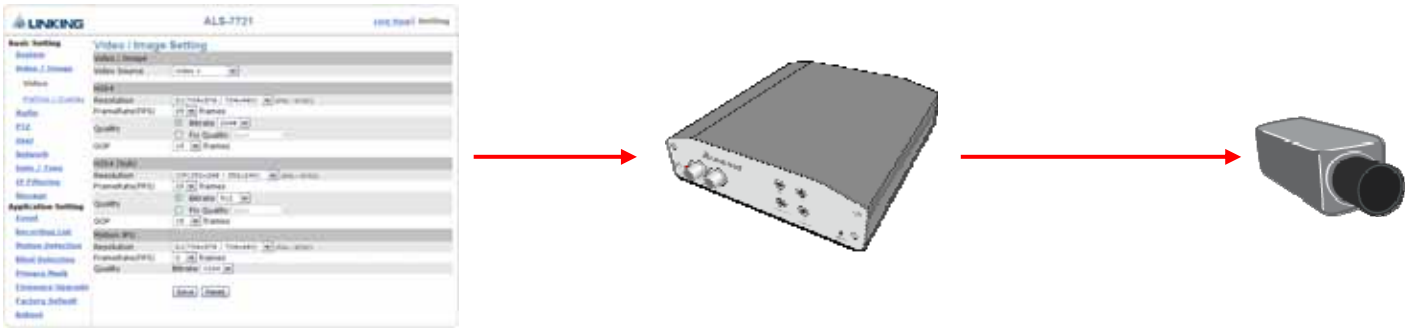
Basic Setting > Video / Image > Video

ALS-7721 can provide three video simultaneous stream: H.264 (Main), H.264 (Sub) and MJPEG. It is recommended to select H.264 for real-time browsing to optimize the bandwidth. MJPEG is a good choice for the best resolution when video recording is required for collection of evidence. According to the requirement, you can select the different sensor scan mode.

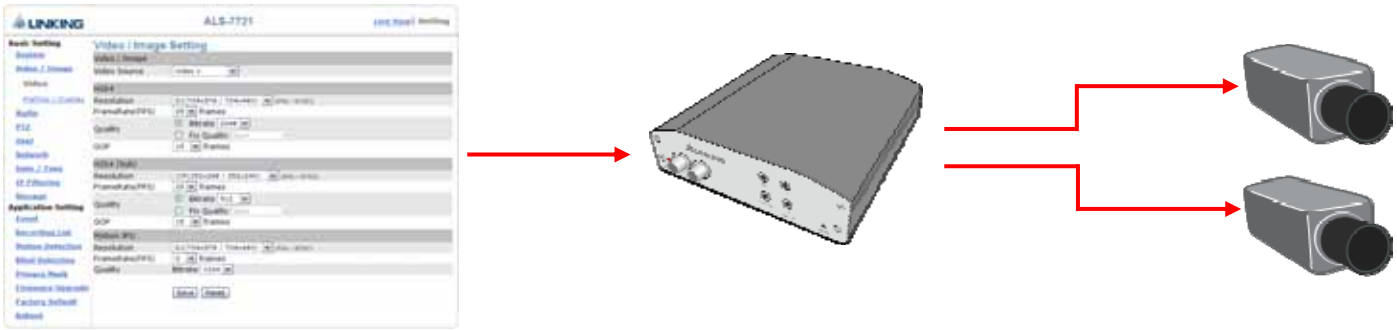
■ **Basic Setting > Video / Image > Video >Video / Image**

Video Source: Select the video source then set up the streaming image by each channel or all channels

From Each channel
Set different settings to individual channels.



From All channels
Set up the same setting to all channel.



■ **Basic Setting > Video / Image > Video Image > Resolution**

Generally speaking, selection of resolution is dependent on the bandwidth of the network you are using. This product offers different selections for video/audio settings. However, to ensure undisrupted image transmission, you need a higher uploading bandwidth. It is recommended to use CIF resolution for normal bandwidth.

The product offers 2 image resolutions (PAL/NTSC):

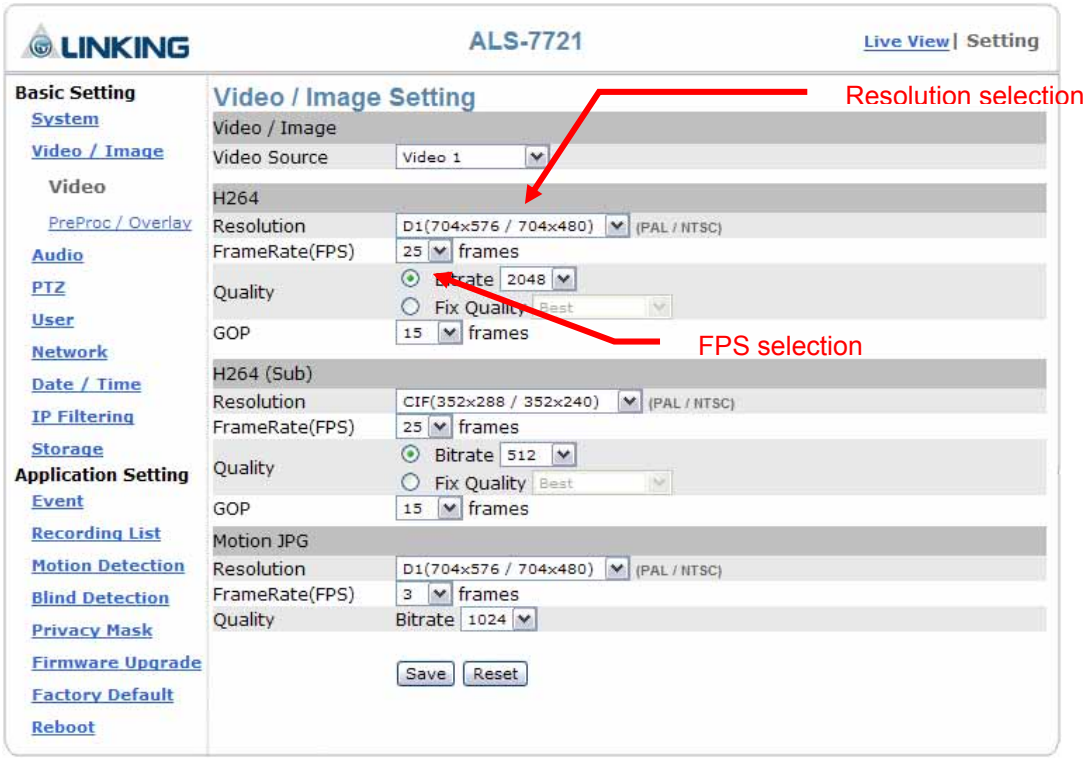
1. D1 (NTSC: 704x576 / PAL: 704x480)
2. CIF (NTSC: 352x288 / PAL: 352x240)

NOTE：
ALS-7721 resolution is according to the video source, so the resolution can only support the D1.

■ **Basic Setting > Video / Image > Video Image >Frame per Second (FPS):**

Set the frame rate from 1~25(PAL)/30(NTSC) in VGA sensor scan mode.

If the network upload bandwidth is insufficient, frame drops might happen such that the target frame rate may not be reached.



NOTE：
Please refer to the **Attachment A: System Requirement** for details.

■ **Basic Setting > Video / Image > Video Image > Quality**

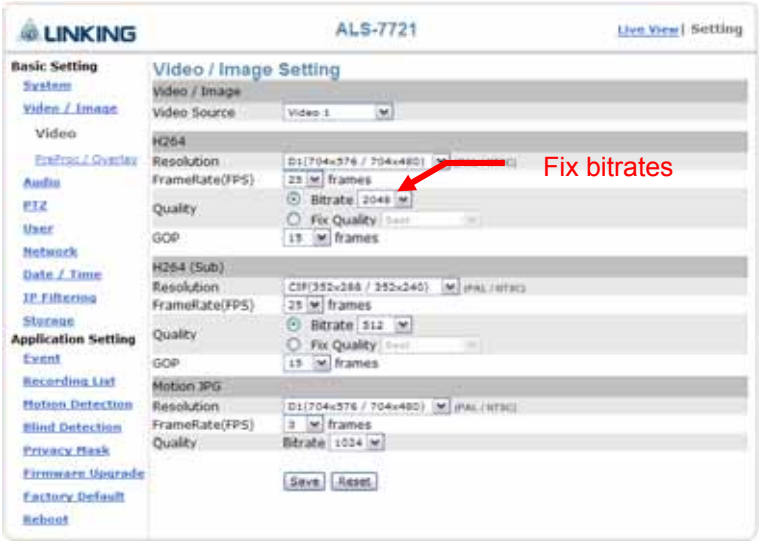
There are two video quality modes:

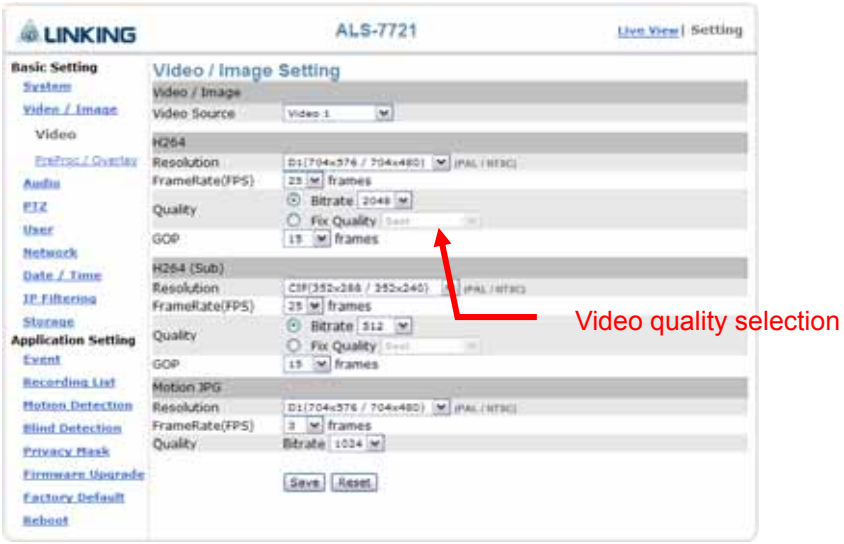
Fixed rate mode is suitable for use in a network environment that the upload bandwidth is limited. Please select the appropriate bit-rate according to your network environment. For example, if the network (upload) bandwidth available for the network camera is 500kbps, 500kbps multiplied 0.8 equals 400kbps (considering 20% overhead).This means that the largest fixed bit-rate should be set less than 400kbps; setting the bit-rate more than that might cause frame drops. Fixed quality mode is suitable for use if you want a constant video quality.

If you want the best quality, Please choose the best option. The system will adjust the frame rate to fit the bandwidth available.

There are 8 options to choose in fixed bit-rate drop-list. The higher bit-rate will get the better video quality.

There are 5 options to choose in fixed quality drop-list. The better video quality will get the higher bit-rate is produced.



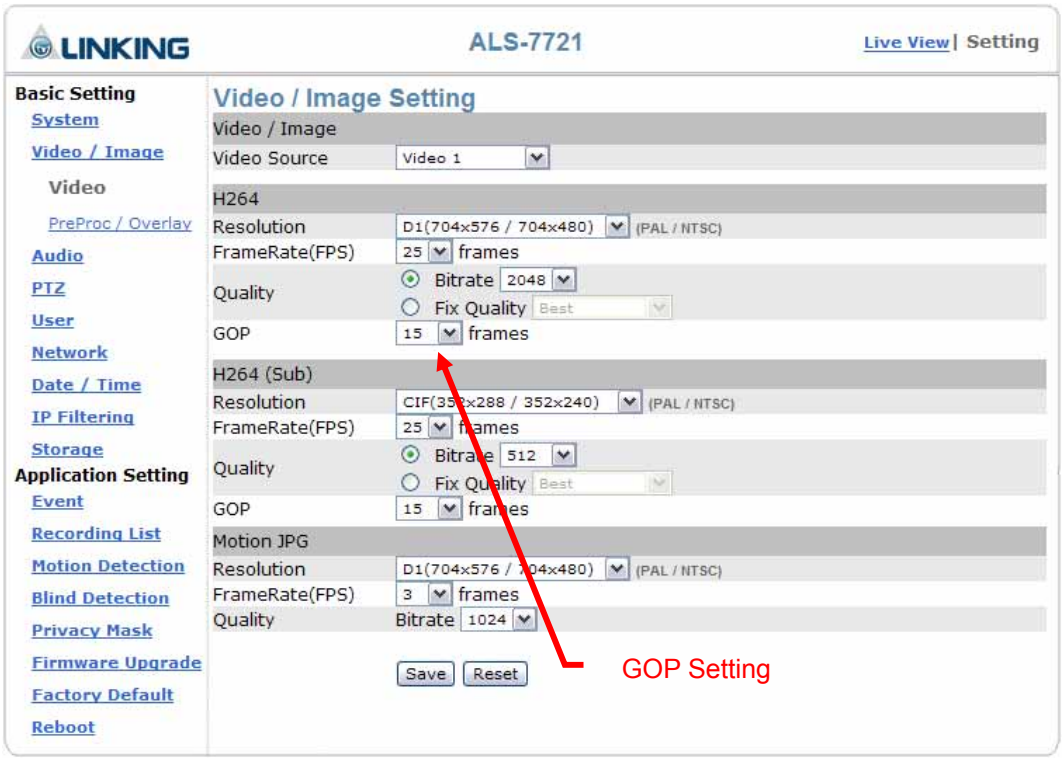


NOTE：
Please refer to the **Attachment A: System Requirement** for details.

■ Basic Setting > Video / Image > Video Image > GOP

GOP provides users with the function to set the pages of the I Frame and P Frame to be transmitted in the H264 mode. Basically, the I Frame page contains the entire picture and needs higher bandwidth, while the P Frame page only contains the parts that are different from the I Frame and need lower bandwidth. Hence, when you need to transmit the pages without disruption in a normal network environment, you can set up a higher GOP. For example, if GOP 15 is selected, 14 P Frame pages will follow 1 I Frame page, and so forth. However, packets may be lost when they are transmitted in a congested network environment. In this case, the following P Frame pages may bring about disruption of the transmission because they lose the reference upon which the difference from the I Frame is identified. You may change GOP to 10 with this concern to avoid disruption of the transmission. The GOP is 15 by default.

NOTE：
Due to the stream is the RTSP streaming, the mobile phone can be receive the stream from ALS-7721. Please make reference to the chapter of **Appendix F: Mobile Application** for different environment description.



Basic Setting > Video / Image > PreProc / Overlay

■ **Basic Setting > Video / Image > PreProc > Video**

Video Source: You can select to display the date, time and text or not.

■ **Basic Setting > Video / Image > PreProc > Overlay**

Display mode: You can select to display the date, time and text or not.

Foreground color: Selects the color for date, time and tax display. Click on the color block to bring out the color palette. Move the pointer to the desired color and click on it.

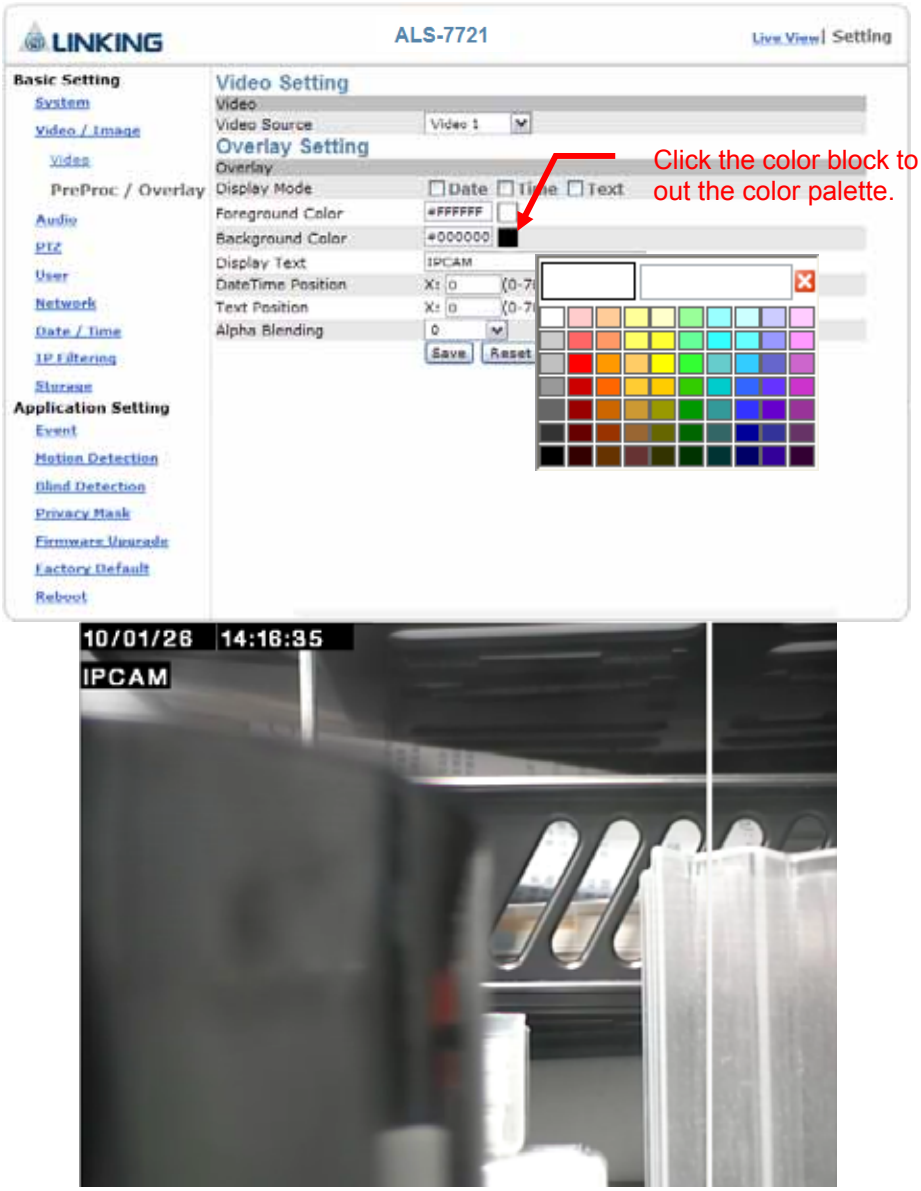
Display text: Inputs the text you wish to display on the screen, e.g. Lobby ALS-7721.

Date/time position: Selects the location where the date and time are displayed on the screen — any of the four corners.

Text position: Selects the location where text is displayed on the screen—any of the four corners.

Alpha Blending: Transparency available options are 0, 50 and 90.

Please don't forget to press **Save** button to save and apply the settings.



Basic Setting > Audio

■ **Basic Setting > Audio > Device Audio Setting > Audio**

There are five kinds of the audio mode to user: Full duplex, half duplex, simplex microphone only, simplex amplifier only and audio off.

Mode:
Full duplex Allow using a microphone and amplifier at the same time, or turning them off.
Half duplex Allow using a microphone or amplifier by manual switch.
Simplex microphone only Allow using the microphone only.
Simplex amplifier only Allow using the speaker only.
Audio off Turns audio off; i.e. both the microphone and speaker are off.

Audio Source:
Select the audio channel to set the codec by each channel or all channels, and the Audio Source means the LINE IN device.

■ **Basic Setting > Audio > Device Audio Setting > Audio In**

There are three kinds of the audio codec to user: G711a, G711u and G726/32K. Select the audio codec to use it for audio encryption.

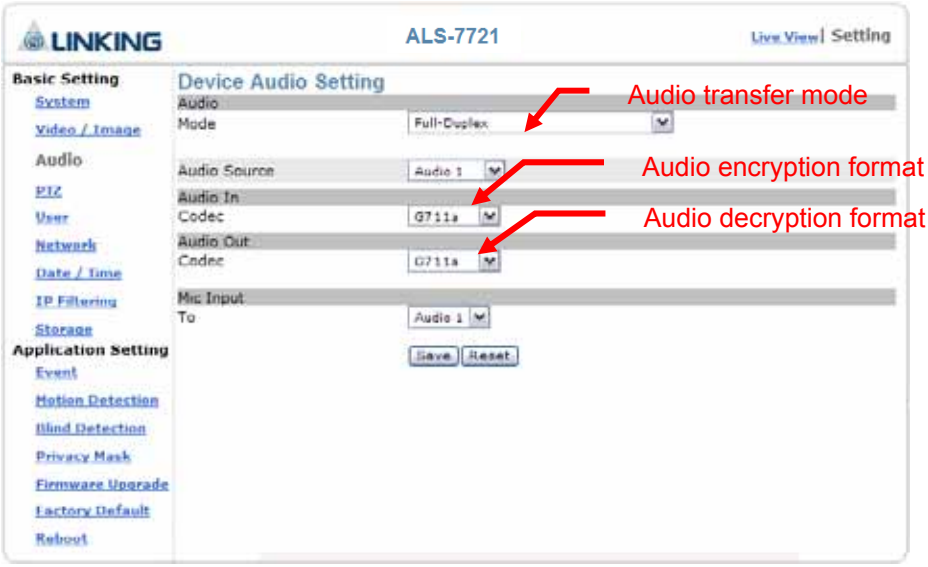
■ **Basic Setting > Audio > Device Audio Setting > Audio Out**

There are three kinds of the audio codec to user: G711a, G711u and G726/32K. Select the audio codec to use it for audio decryption.

Code	Compression Bitrates (Kbit/s)	Note
G711a	64	PCM (For American System)
G711u	64	PCM (For European System)
G726/32K	32	ADPCM

■ **Basic Setting > Audio > Device Audio Setting > Mic Input**

The audio channel will integrate the package of LINE IN and MIC IN. If the selection is the audio 1, the channel 1 will provide the LINE IN and MIC IN audio in the same time.



Basic Setting > User

The administration of the camera can set up access privileges by administrator, operator, and viewer to ensure the security and control of the camera. The access privileges and setting steps are described as below.

Basic Setting > User > User Setting

The access privileges of the administrator, operator, and viewer are listed as follows. The administrator has the right to define the privilege for each user depending on requirements.

User		Administrator	Operator	Viewer
Live View				
Live View		v	v	v
Setting				
Basic Setting				
System		v	v	
Video / Image		v	v	
Audio		v	v	
PTZ		v	v	
User		root		
Network		v		
Date / Time		v		
IP Filtering		v		
Storage		v		
Application Setting				
Event		v	v	
Motion Detection		v	v	
Blind Detection		v	v	
Privacy Mask		v	v	
Firmware Upgrade		root		
Factory Default		v		
Reboot		v		

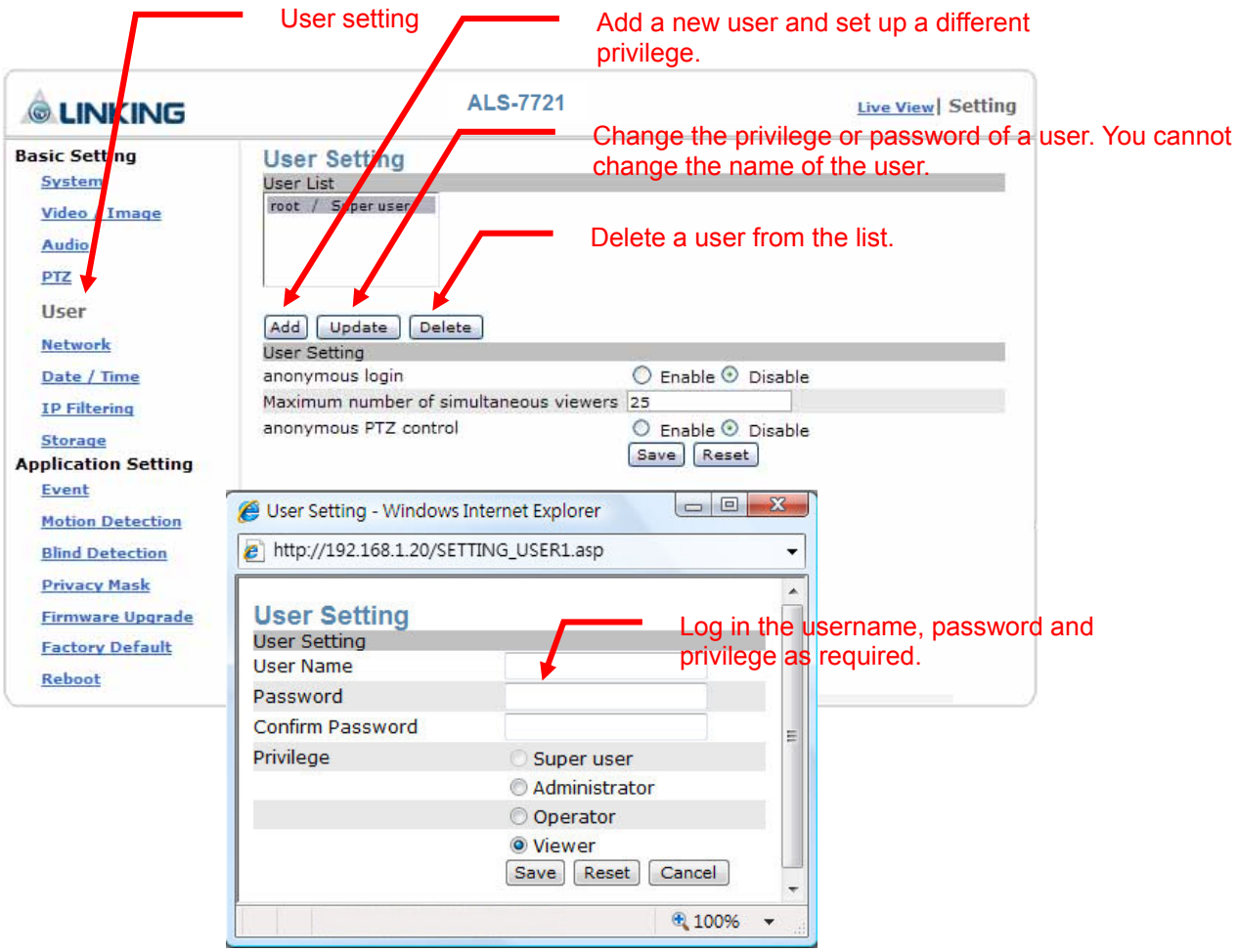
■ **Basic Setting > User > User Setting > User List**

Click Add (to add a new user), Update (to change the privilege or password of a user on the list), or Delete (to delete a user from the list) and complete required fields. Then Click "Save" to complete the setting.

Add:
Add a new user and set up a different privilege.

Update:
Change the privilege or password of a user. You cannot change the name of the user.

Delete:
Delete a user from the list.



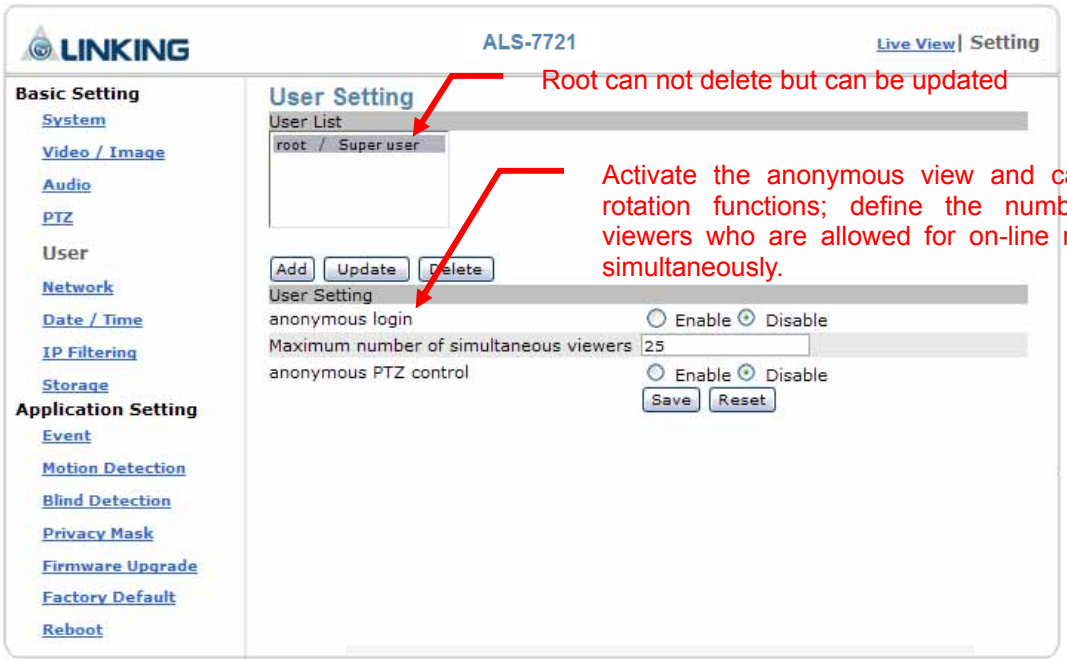
■ **Basic Setting > User > User Setting > User Setting**

anonymous login:

For special business situations, this product allows you to log in to browse without the need of keying in your username and password. For this purpose, you need to check “Enable” at Anonymous Login. However, “Disable” for this options is recommended for the sake of security.

Maximum number of simultaneous viewers

Depending on the bandwidth and requirements, a limit up to 20 viewers who are allowed to view the camera simultaneously can be defined.

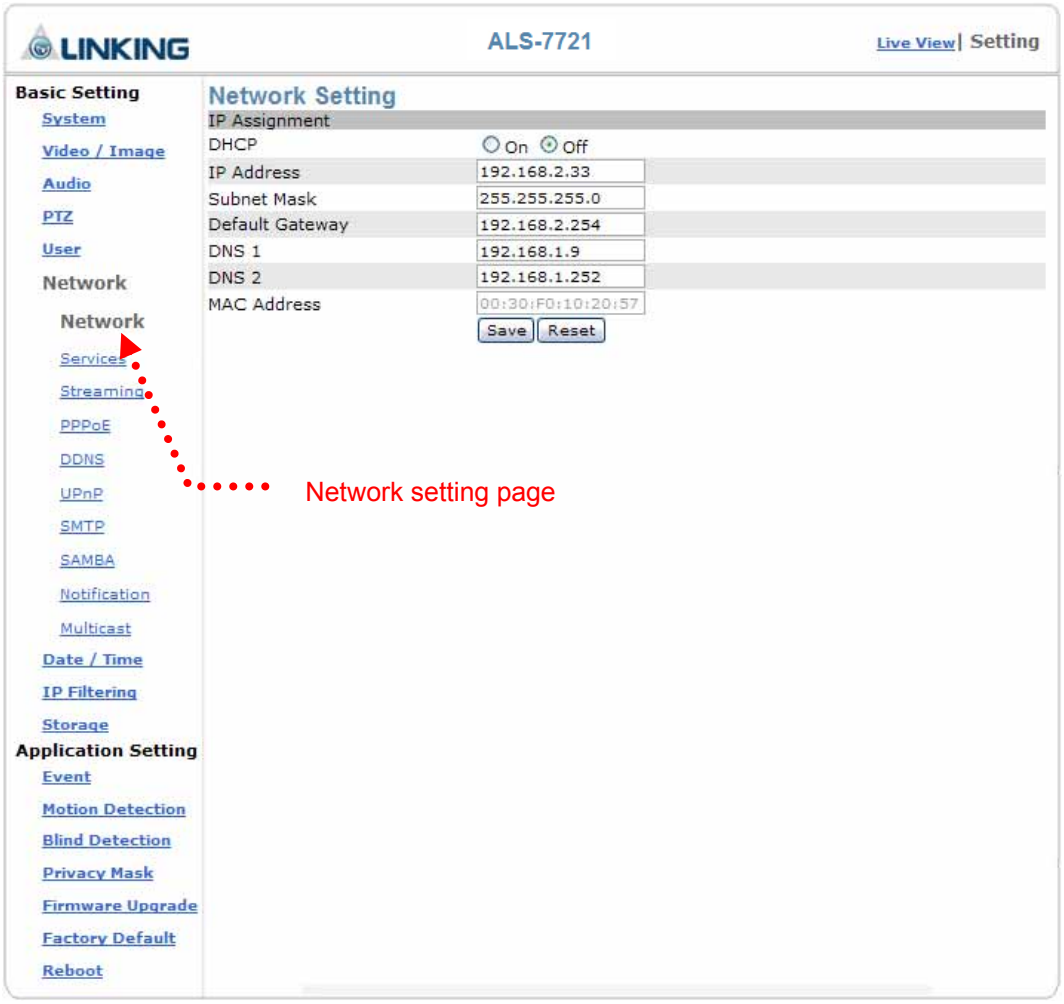


Attention: The default user name and password have been set as “root”. The root user cannot be deleted but root’s password can be changed. For the safety consideration, it is recommended change the root’s password when the first time login. You can press the reset bottom to reset to factory default.

Basic Setting > Network

Basic Setting > Network > Network (Wired Network Setting)

■ **Basic Setting > Network > Network > IP Assignment**



DHCP setting:
DHCP (Dynamic Host Configuration Protocol) is a protocol that enables automatic assignment of TCP/IP information to the client. Each DHCP client connects to the DHCP server to access its network setting information, including IP address, gateway, and DNS server.

The IP address of the camera is 192.168.0.20 by default when DHCP is "OFF". When you select "DHCP ON" and access the DHCP network environment, the camera will automatically send a DHCP packet to request an IP address. This IP address is assigned automatically from the DHCP server on the network. No additional settings are required for this page unless you need to change the network configuration. The DHCP status of the camera is "OFF" by default.

Other settings:
For IP address, Subnet mask, Default gateway, DNS 1, and DNS 2, the DHCP server will assign these values automatically when DHCP is in "ON" status; otherwise, you need to key in the values manually.

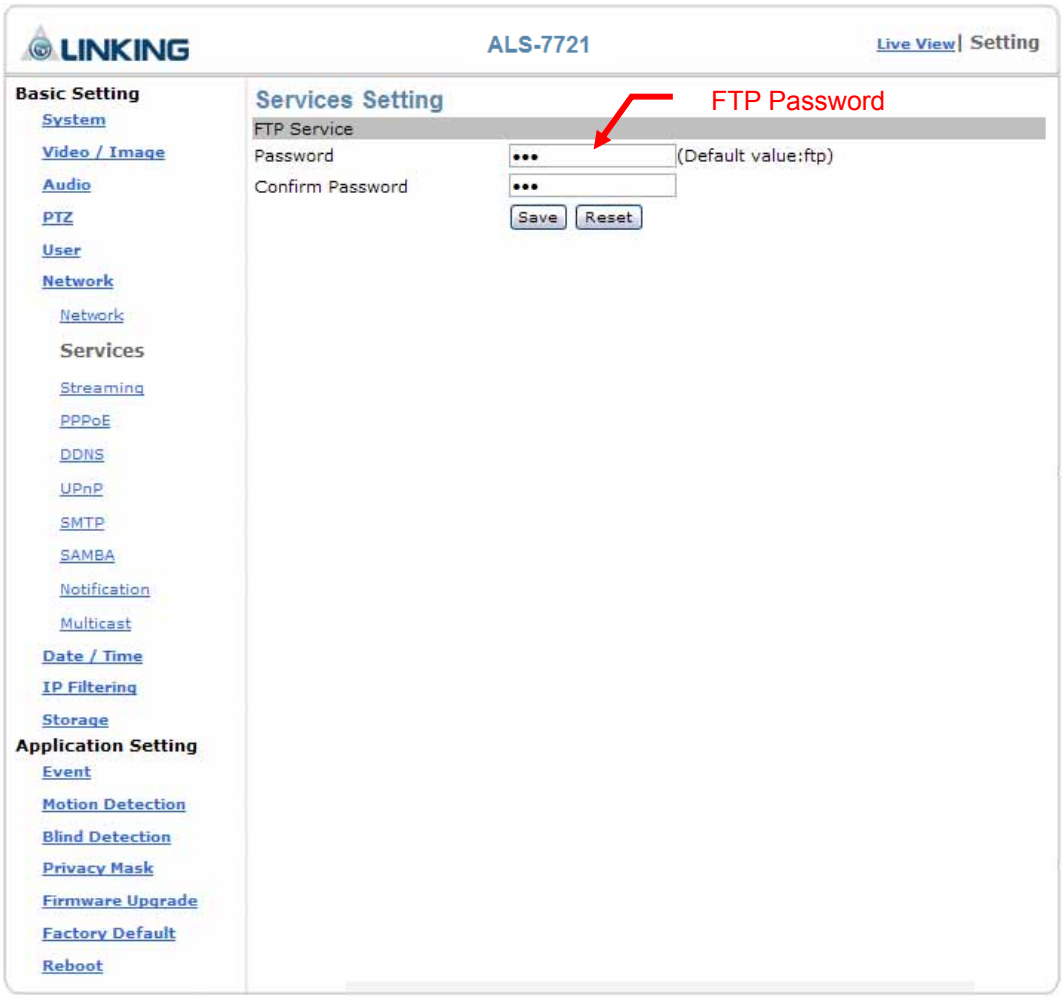
NOTE：
Where no IP address is assigned from the DHCP server, the system will set the Link-Local Address automatically

Basic Setting > Network > Service

■ Basic Setting > Network > Service > FTP Service

ALS-7721 can become the small FTP server to download the AVI or JPEG file from SAMBA or SD Card. The default status is enabling the function. Due to the function only provide the SAMBA and SD Card applications, ALS-7721 not release all FTP setting for user.

The default account and password is “ftp”, and you can only modify the password by yourself.



Basic Setting > Network > Streaming

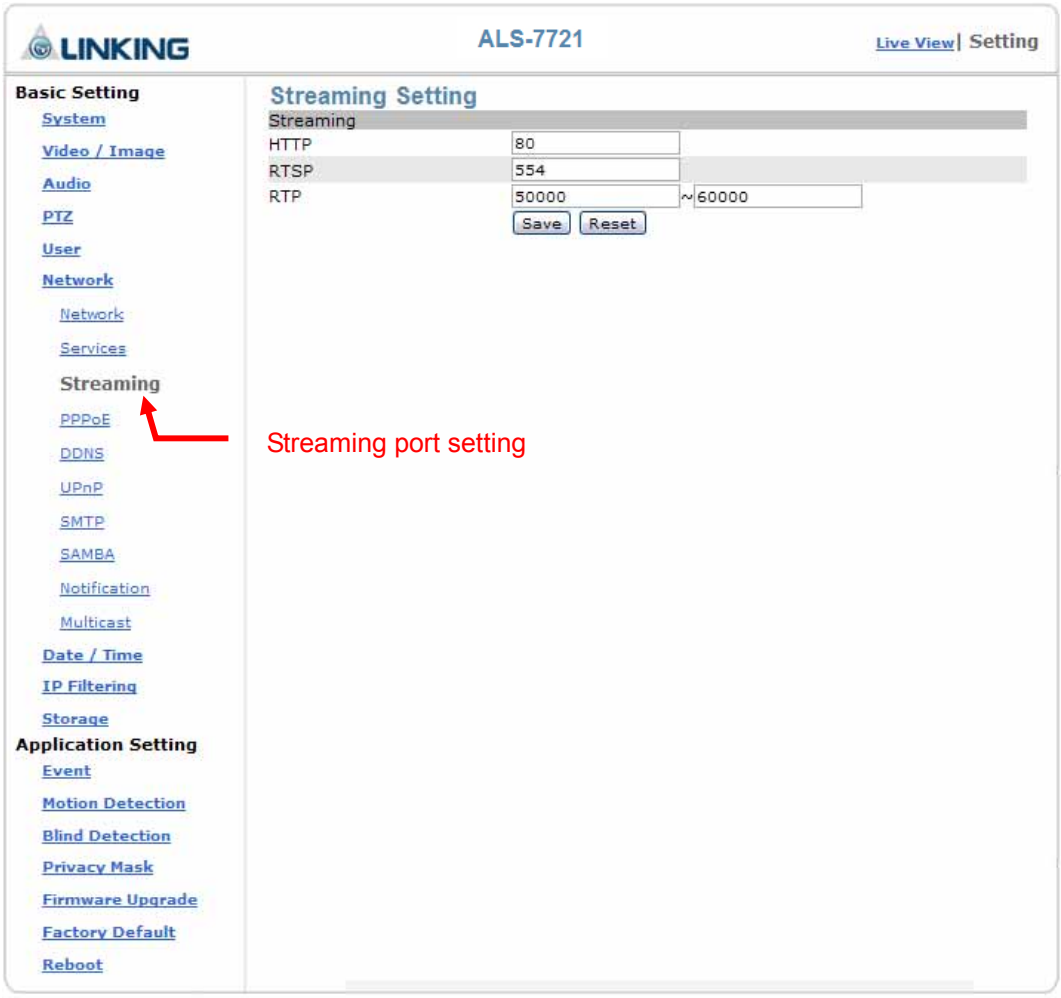
Setting of the video streaming port (HTTP and factory default are recommended)

■ Basic Setting > Network > Streaming > Streaming

HTTP: Port 80 can pass through most firewalls. Video streams are transmitted through HTTP Port (80 by default) to ensure passage through firewalls.

RTSP: Port 554 uses a fixed port (i.e. TCP) or can be defined by users to ensure reliable data transmission. Video streams are transmitted through RTSP Port (554 by default) to avoid video fragment or mosaics due to poor transmission quality.

RTP: Port 50000 to 60000 are UDP ports and can be defined by users. They provide the fastest but also most unreliable transmission service. Video streams are transmitted through UDP Port (50000~60000 by default) to ensure the fastest image transmission. However, video fragment or mosaics may occur due to poor transmission quality.



NOTE：
Please make reference to the chapter of **Streaming** for further detailed description.

Basic Setting > Network > PPPoE (Dial-up Networking Setting)

Point-to-Point Protocol over Ethernet is a protocol that supports access to a high-speed wideband network using a PC and a wideband modem (such as xDSL, Cable, Wireless modem). The user need only to equip the PC with an Ethernet card and apply to an ISP and an ADSL provider (such as Chunghwa Telecom) for ADSL service to roam the Internet through ordinary twisted copper wires.

PPPoE setting must be executed in the LAN environment for your PC to connect to ADSL. Follow the steps below to complete the setting:

1. Dial: You can select whether or not to dial when you boot the machine.
2. Use DHCP or fixed IP for connection to the LAN environment.
3. Key in the IP address of the camera and enter "PPPoE Setting" following the route Setting ➔ Basic Setting ➔ Network➔ PPPoE.
4. Key in the xDSL "Username" and "Password" acquired from your ISP. Click **Save** to confirm the setting.
5. Where the ADSL modem and the camera is connected via a switch-hub, you can press “Reboot” or restart the machine manually to try PPPoE dialing when the setting of the camera has been completed.
6. A different IP address is obtained after each dial-up network connection. You can get the new IP address from Setting ➔ Basic Settings ➔ System. If you want to know the new IP address anytime, you must enter Setting ➔ Basic Settings ➔ Notification to set some settings. There are three ways to get information: 1. SMTP 2. FTP 3. HTTP. For details, refer to the Notification Setup Menu.

NOTE：

You can use the DDNS function to access the camera. Refer to the “DDNS Setting” page for more information.

■ **Basic Setting > Network > PPPoE > PPPoE**

Dial:
You can select whether or not to dial when you boot the machine (On Boot or Off).

Username:
Enter the username provided by your ISP.

Password:
Enter the password.

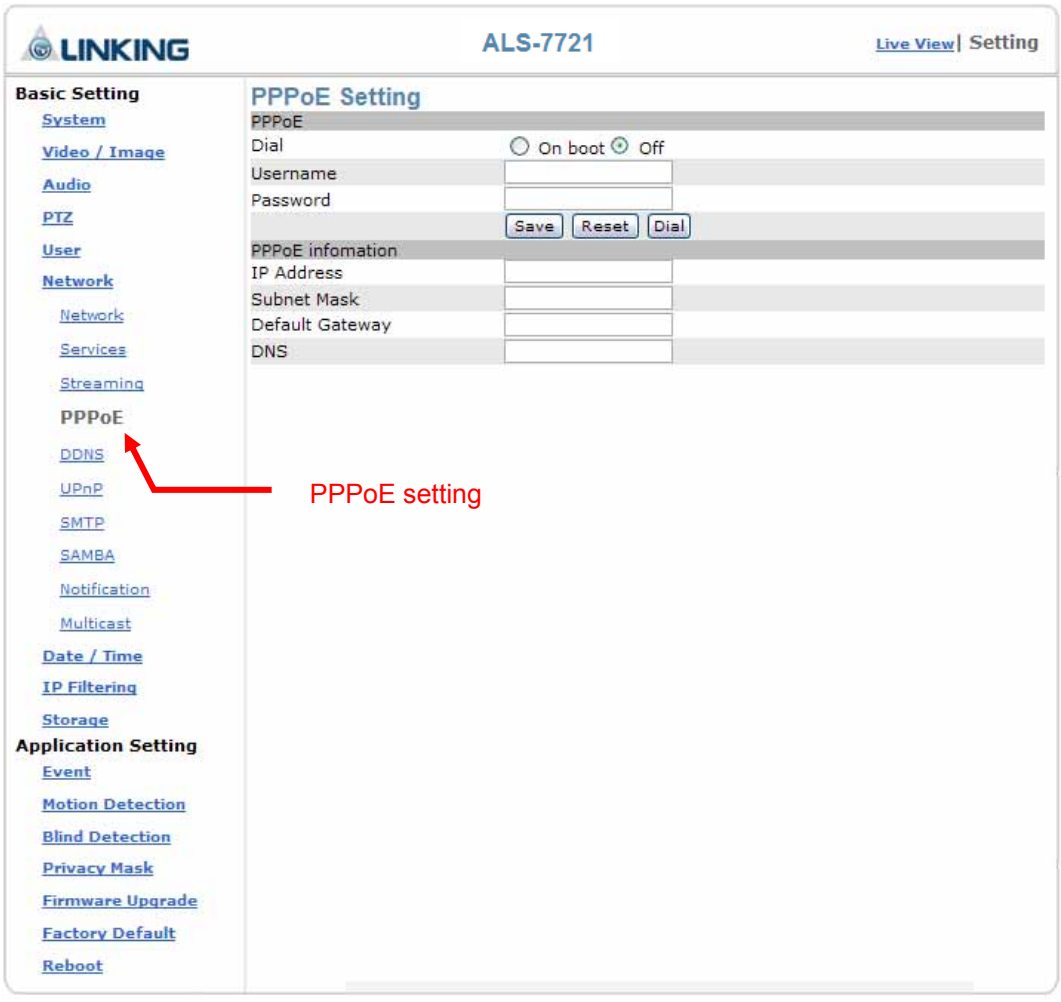
■ **Basic Setting > Network > PPPoE > PPPoE Information**

IP Address:
The IP address acquired when dialing has been executed successfully.

Subnet Mask:
The subnet mask information acquired when dialing has been executed successfully.

Default Gateway:
The gateway information acquired when dialing has been executed successfully.

DNS:
The ISP domain name acquired when dialing has been executed successfully.



Basic Setting > Network > DDNS (Dynamic Domain Name Server)

The IP address (Ex. 210.168.0.22) is like a telephone number, while the website address is like a name in an address book. The DDNS allows the user to access the website by entering the name of the website without memorizing a bunch of cold numbers.

When you apply for an Internet service, you will have at least one IP address from your ISP that is either fixed or dynamic. Most of the ADSL service providers will give you a dynamic IP for ADSL environments, which means your IP address will constantly change each time you connect to the Internet. As a result, users from WAN environments will have much difficulty finding the correct IP address. The DDNS (Dynamic DNS service) is created for exactly this kind of moment. By updating your WAN IP address each time you connect to the Internet, the DDNS helps you locate your website and access your website easily. You can find a lot of free DDNS service providers on the Internet, such as www.no-ip.com and www.DynDNS.org.

Some gateway-routers can directly communicate with DDNS. In this case, you may directly enter your DDNS account on the setting page in the Internet router, and then the router will update your WAN IP status whenever it is changed and report to the DDNS. If your router does not support direct communication with the DDNS, you can download a small application program on the DDNS service page to help you update your WAN IP.

■ **Basic Setting > Network > DDNS > DDNS**

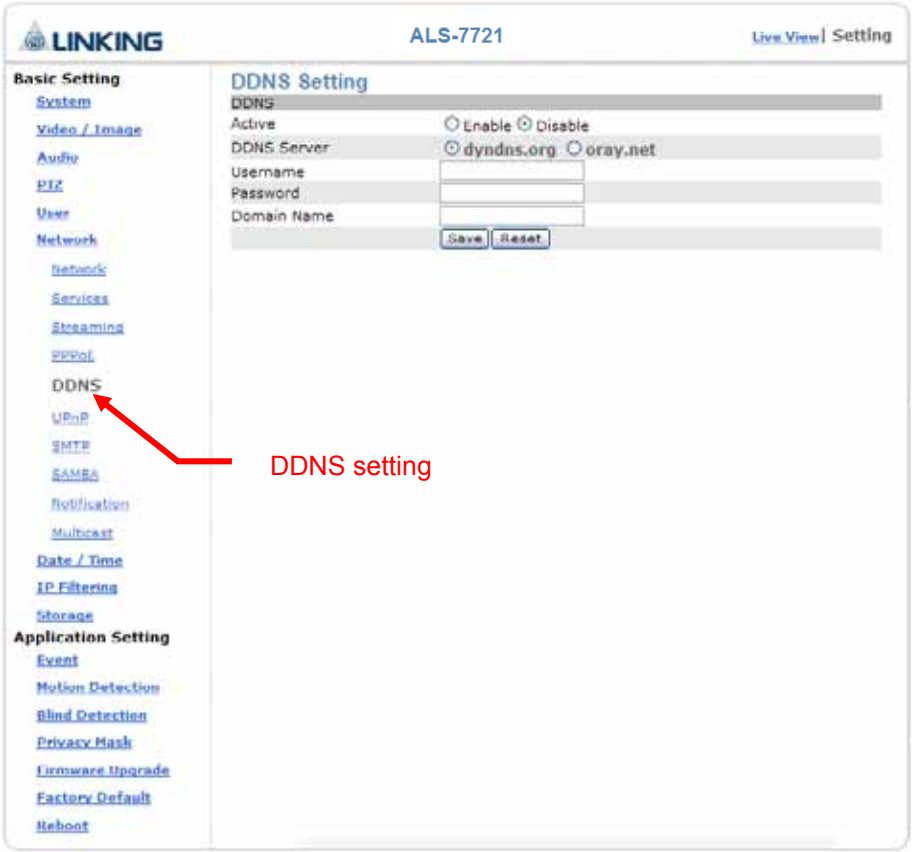
Active: Enables/disables DDNS

DDNS Server: Currently we only support http://dyndns.org. This is a free domain name server provided by DynDNS. You may log on this website for relevant information and apply for free domain names.

Username: Your account for the domain name you applied for

Password: Your password for the domain name you applied for

Domain Name: The domain name you applied for.



Basic Setting > Network > UPnP (Universal Plug and Play)

If you connect your camera to a router, IP allocator, or wireless AP, your camera will possibly be blocked by the NAT and can't be located on the Internet. To penetrate the firewall, activate the supportive item- UPnP. The Link URL shows the external IP address and the port of the router. Enter the IP address in the Internet Explorer to penetrate the NAT.

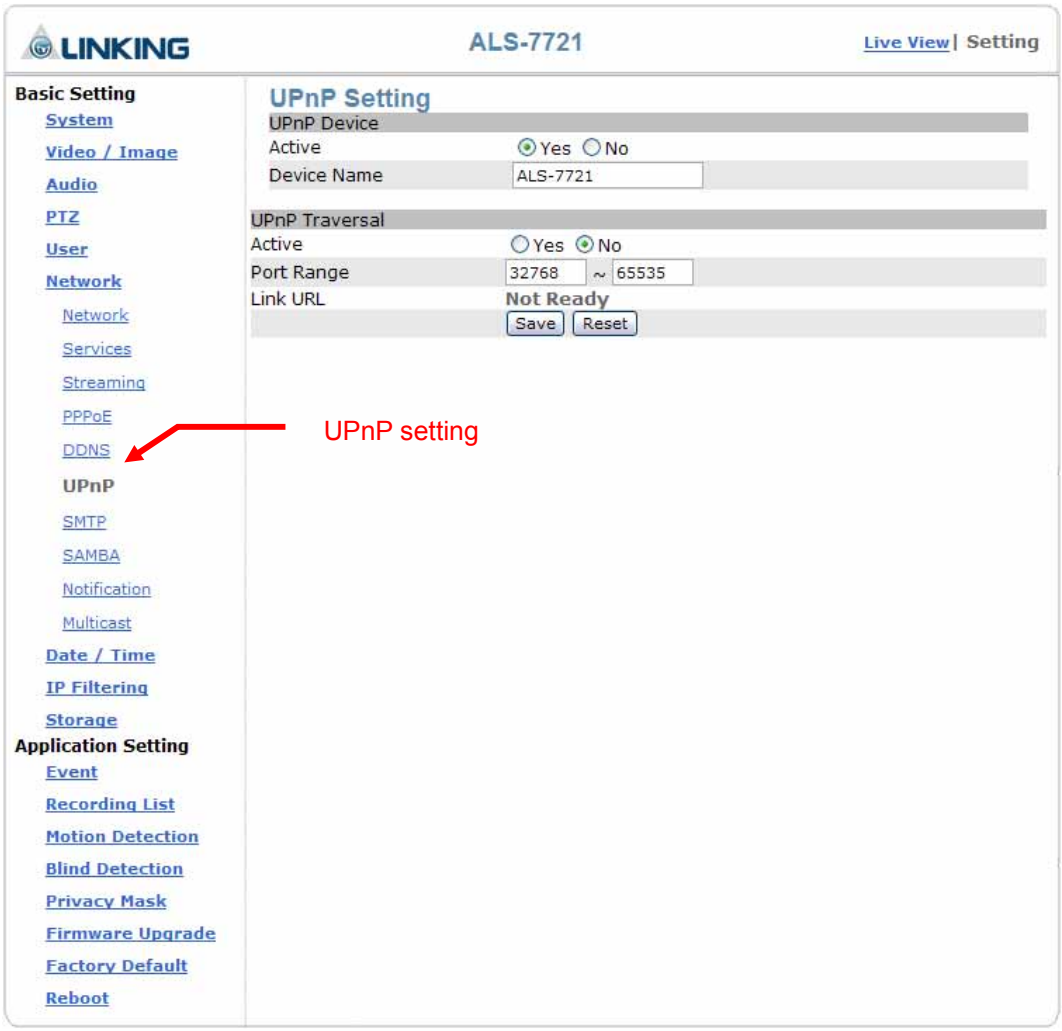
■ Basic Setting > Network > UPnP > UPnP Device

Active: yes (enable)/no (disable)
Device Name: the name of the UPnP device

■ Basic Setting > Network > UPnP > UPnP Traversal

Active: yes (enable)/no (disable)
Port Range: the range of the usable ports, from 32768 to 65535 as default
Link URL: After the network camera penetrates the firewall successfully, the actual external IP address and port will be shown.

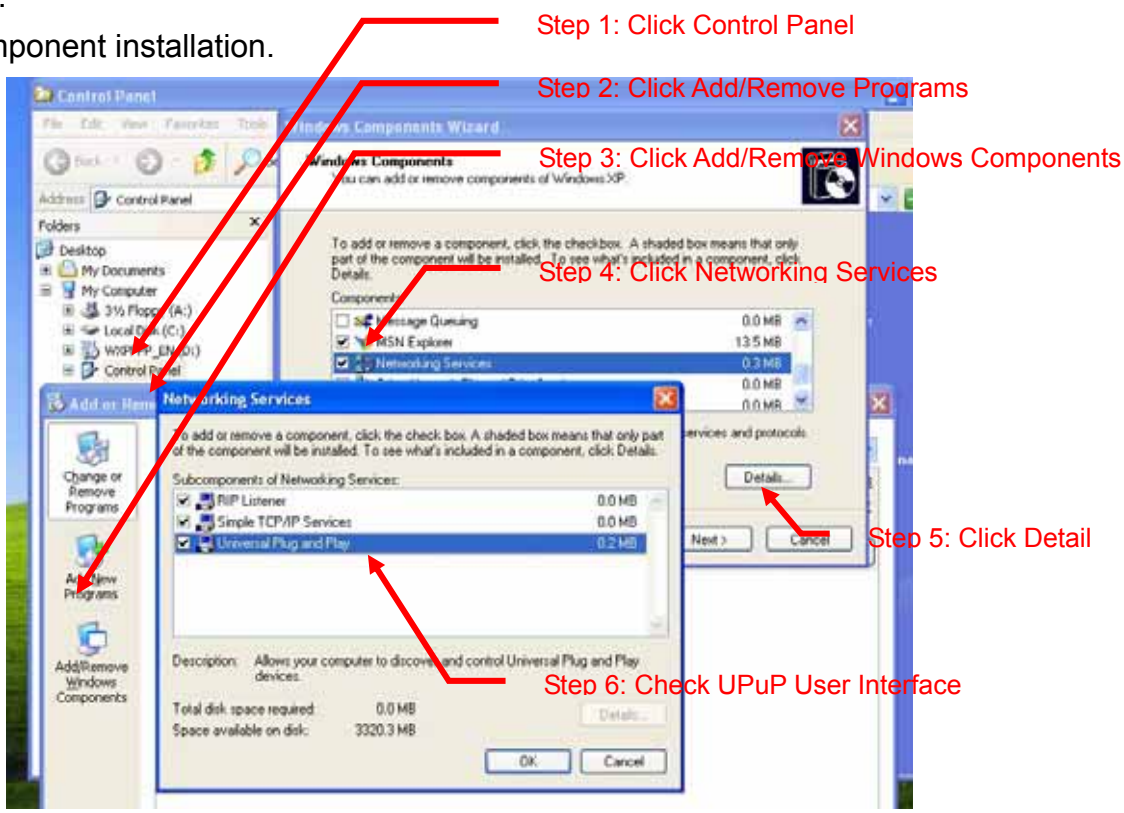
Click **Save** to confirm when you finish.



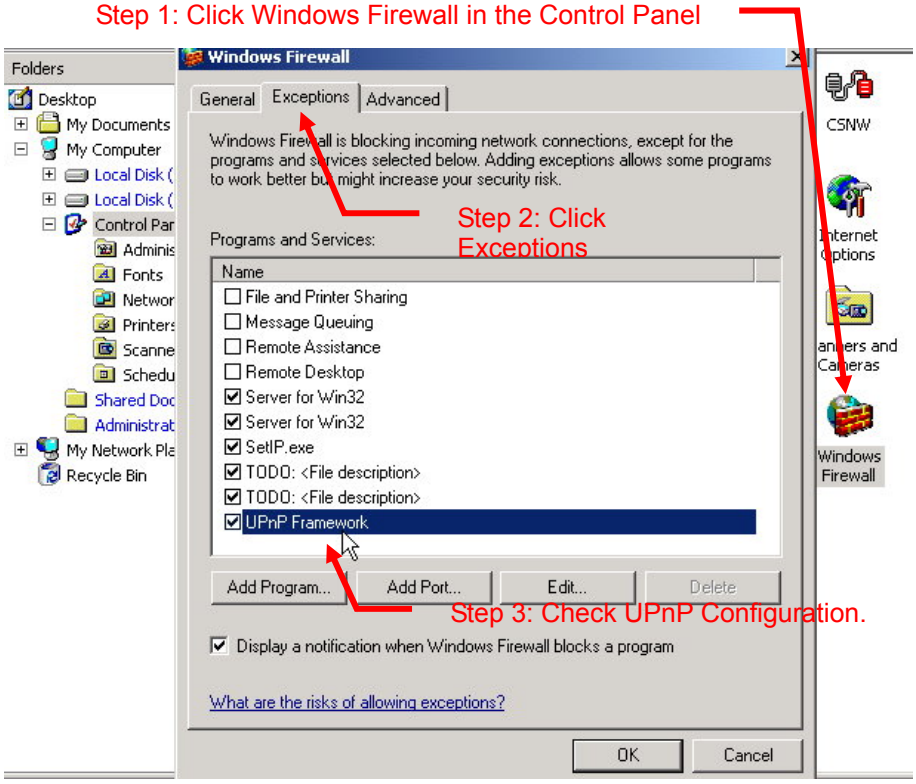
To activate the UPnP function in Windows OS:

Ex: Windows XP:

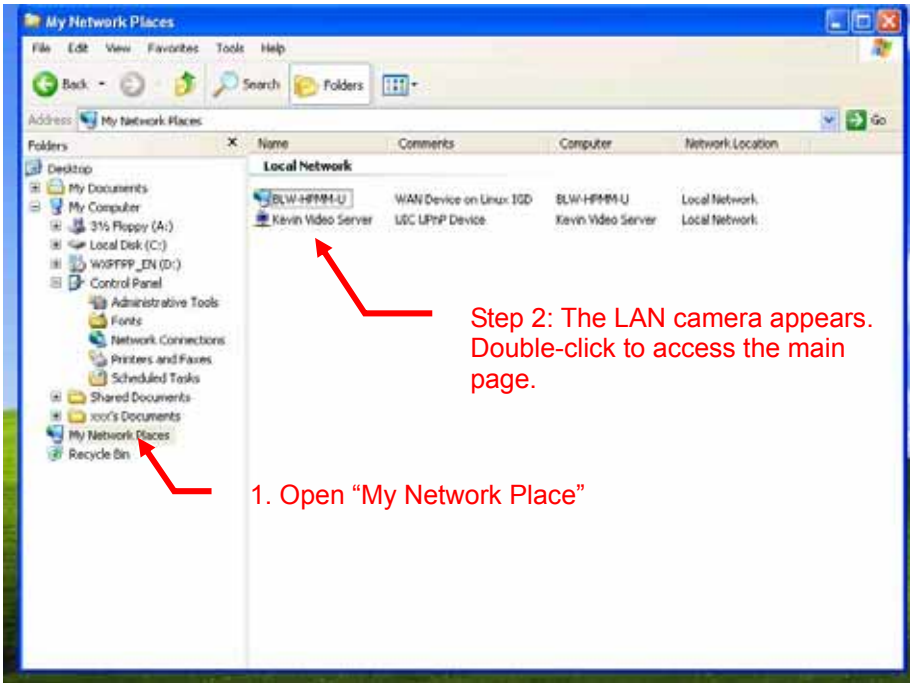
1. Windows component installation.



2. Open Windows firewall option



3. View the connection device using “My Network Place”



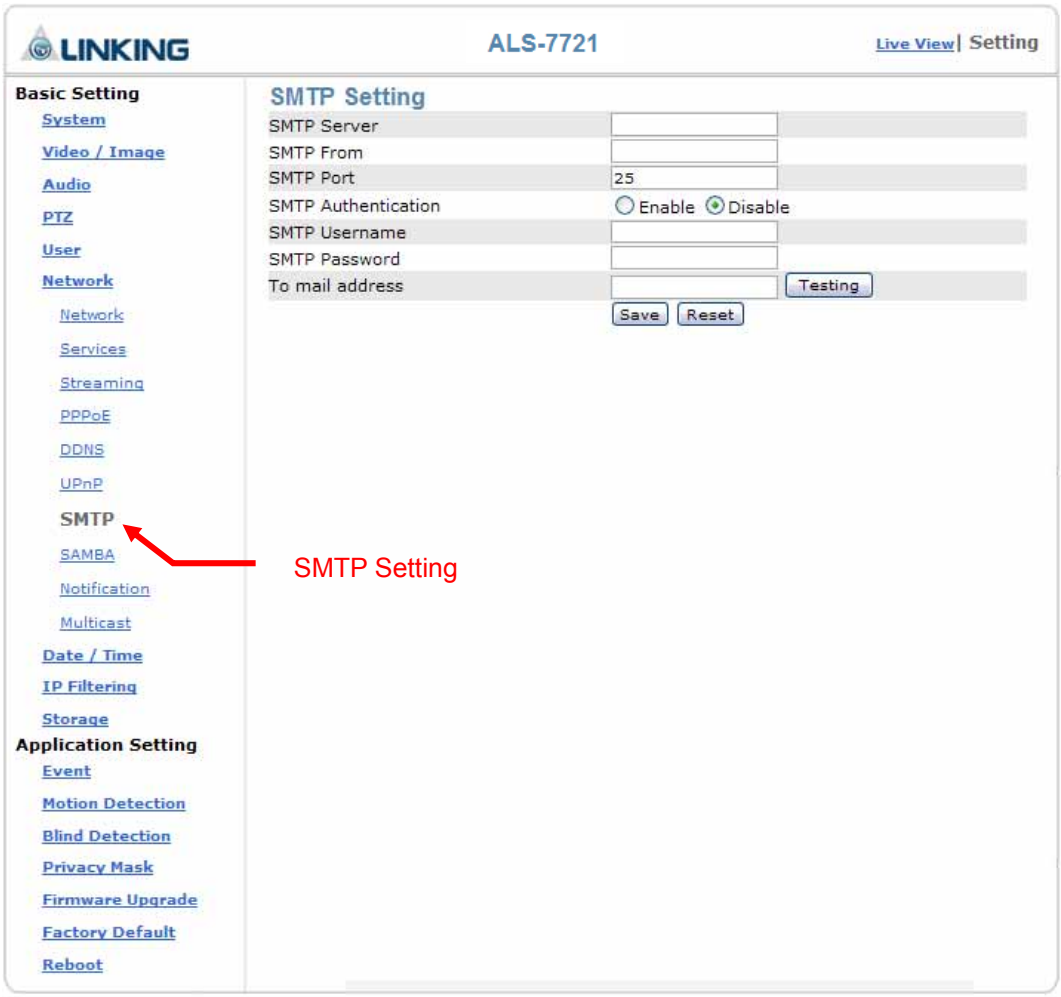
Basic Setting > Network > SMTP Server (mail server setting)

This camera is able to transmit images to a particular email address when a motion detection event occurs or a sensor is triggered. To use this function, a mail server setting for the camera is required.

Enter the following information in sequential order to complete the setting:

SMTP server:
The SMTP server IP address.
SMTP From:
The email of the sender, i.e. xxx@xxx.com
SMTP Authentication:
Enables/disables
User name:
The user name is from SMTP server.
Password:
The password is from SMTP server.

Select **Save** to save the setting.



NOTE：

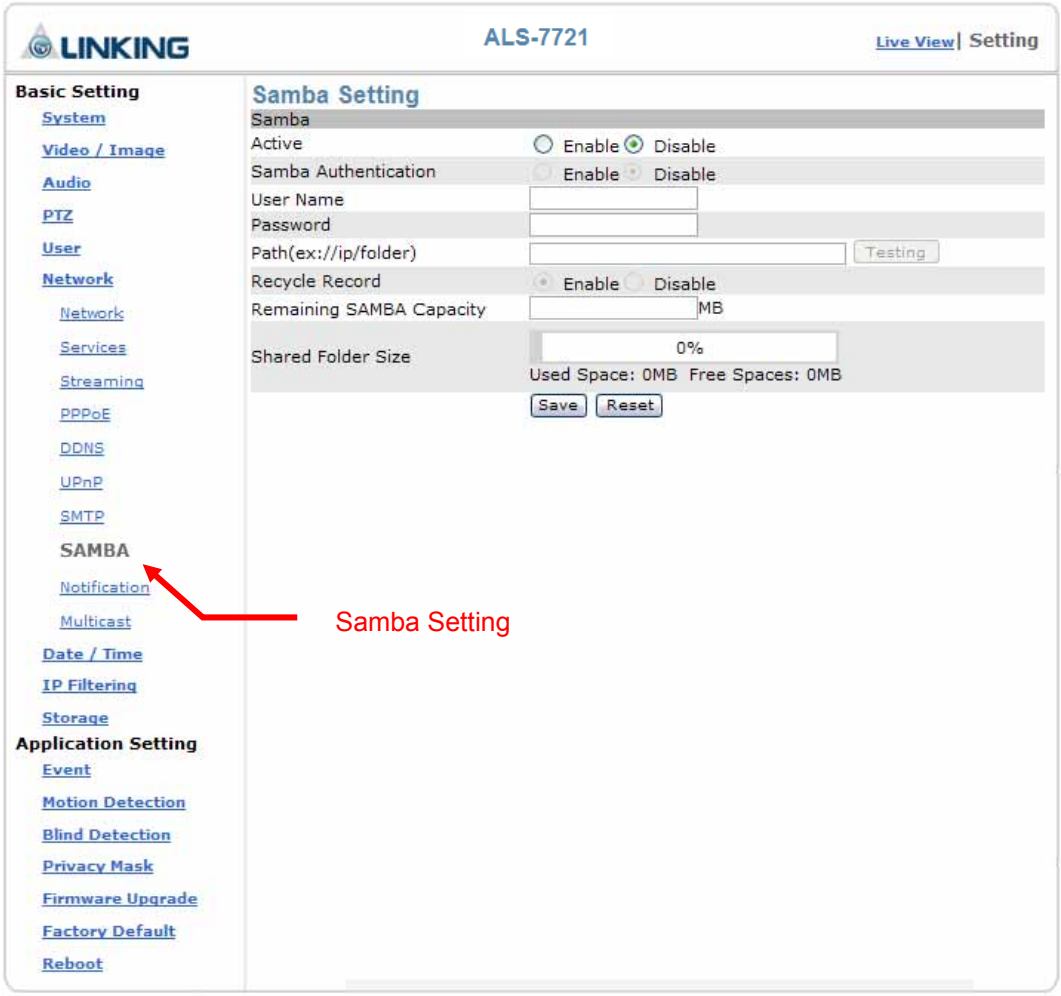
ALS-7721 can only support the mail account of SSL (Secure Sockets Layer) cryptographic protocol, and the normal free webmail service belong the TLS (Transport Layer Security) cryptographic protocol

Basic Setting > Network > Samba

This camera is able to upload the snapshots to a specified shared folder when an event is triggered. To use this function, a Samba setting is required.

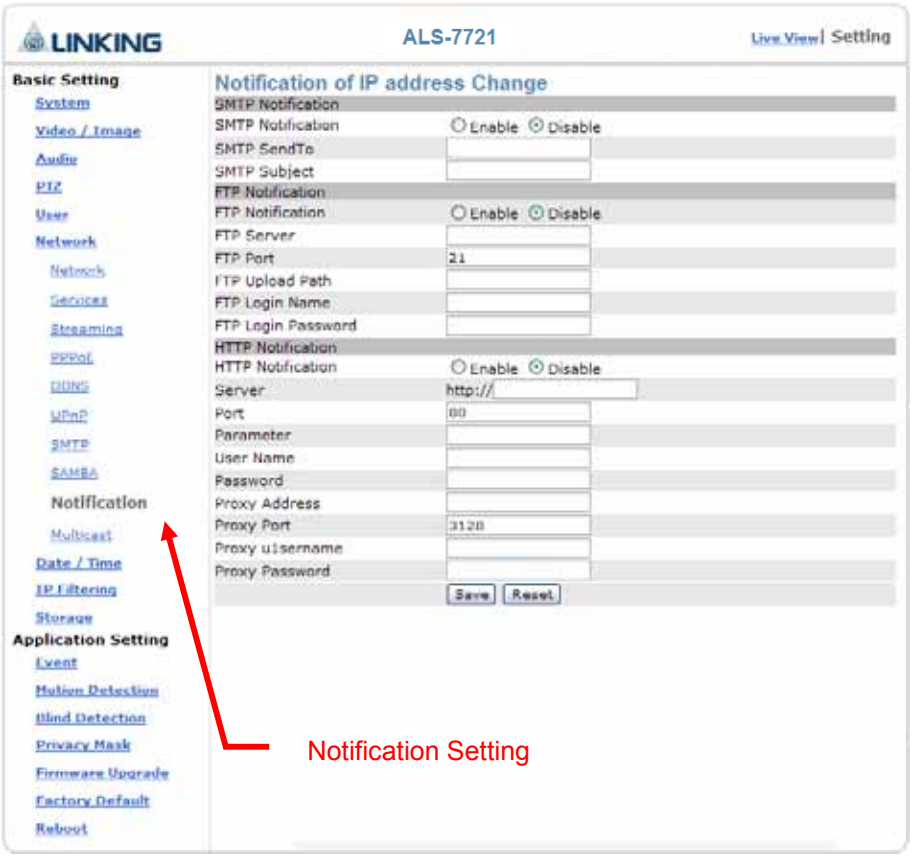
■ Basic Setting > Network > Samba > Samba

Active: Enable/Disable
Samba Authentication: Enable/Disable
Username: The username
Password: The password
Path: Specify the IP address of the computer you want to share with and the file name, i.e. 192.168.0.X/xxx
Recycle Record: Enable for the last record file to mantle the first record file.
Remaining SAMBA Capacity: The remaining capacity can be record.
Shared Folder Size (MB): The total capacity of the folder. Always remember to set the size of the folder to avoid exhaustion of disk capacity.



Basic Setting > Network > Notification of IP address Change

For a dynamic IP, you need to update the IP address every time you connect to the Internet to access the camera. This setting allows you to update the IP address by the automatic notification of IP address change. Choose one of the following three notice options to update the IP address:



■ **Basic Setting > Network > Notification of IP Address Change > SMTP Notification**

SMTP Notification: notification via SMTP mail server

SMTP SendTo: the recipient, i.e. xxx@xxx.com

SMTP Subject: mail subject

Select **Save** to complete and activate your settings.

■ **Basic Setting > Network > Notification of IP Address Change > FTP Notification**

FTP Server: FTP Server name.

FTP Port: FTP port. The default setting is 21 (recommended).

FTP Upload path: the path to upload files.

FTP Login name: the name to log in the FTP.

FTP Login Password: the password to log in the FTP.

Select **Save** to complete and activate your settings.

■ **Basic Setting > Network > Notification of IP Address Change > HTTP Notification**

Server: the address of the server, i.e. http://.

Port: the port to access HTTP. The default setting is 80 (recommended).

Parameter: the setting of the parameters, refer to the installation setting of your HTTP server.

Refer to the installation setting of your HTTP server for the setting of the parameters (such as Username, Password, and Proxy).

Select **Save** to complete and activate your settings.

Basic Setting > Network > Multicast

This function allows multiple people to watch video streaming without limitation on the number of users, but is only applicable in the LAN environment. The video streaming format (h2644/MJPEG) depends on the selected image format setting in Basic Setting → Video/Image → Video Format.

■ Basic Setting > Network > Multicast > H264 (Main Stream)

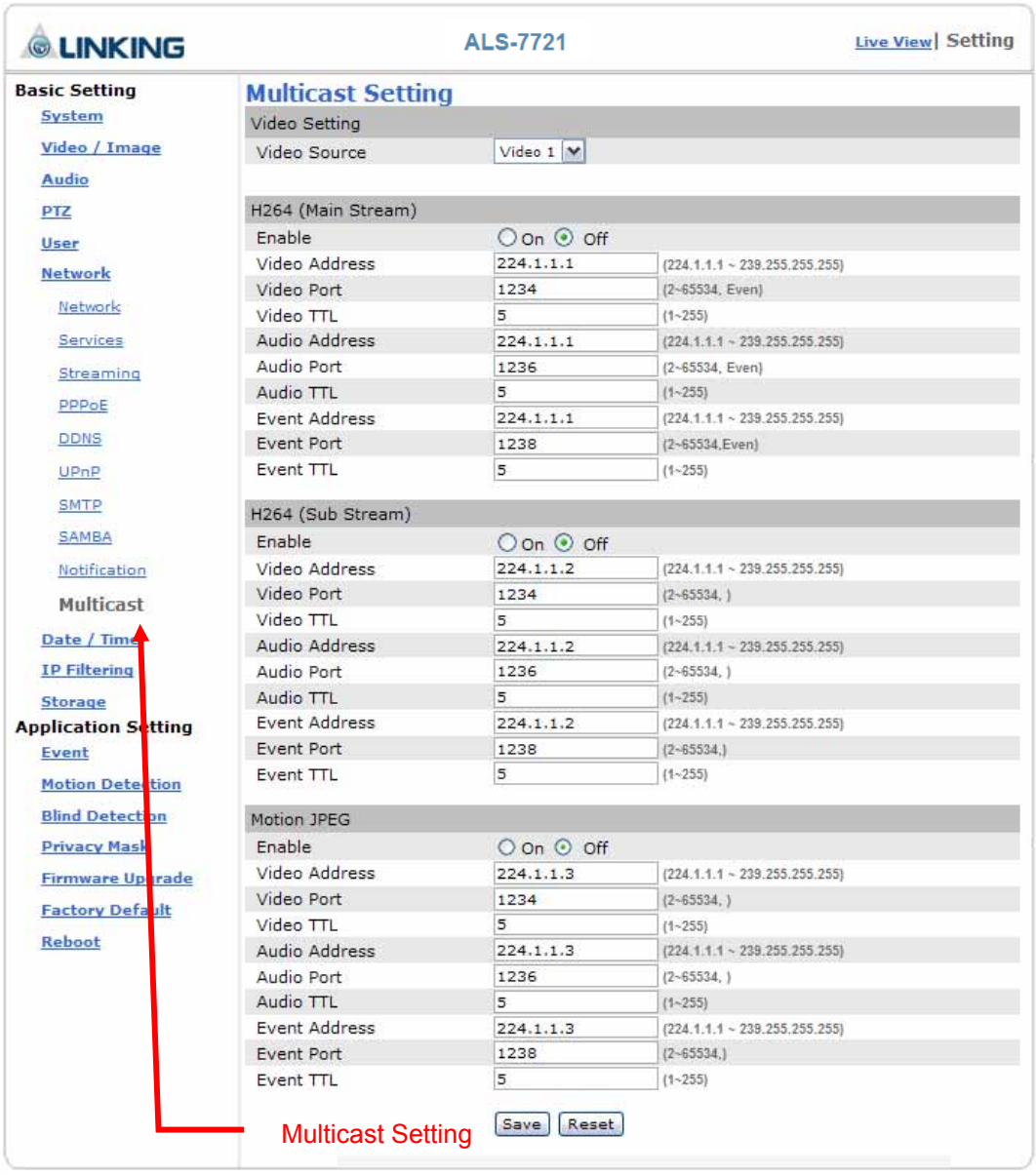
This function allows multiple users to view the H264 video stream free from restrictions on the number of users. However, this is only effective within the LAN.

■ Basic Setting > Network > Multicast > H264 (Sub Stream)

This function allows multiple users to view the H264 video stream free from restrictions on the number of users. However, this is only effective within the LAN.

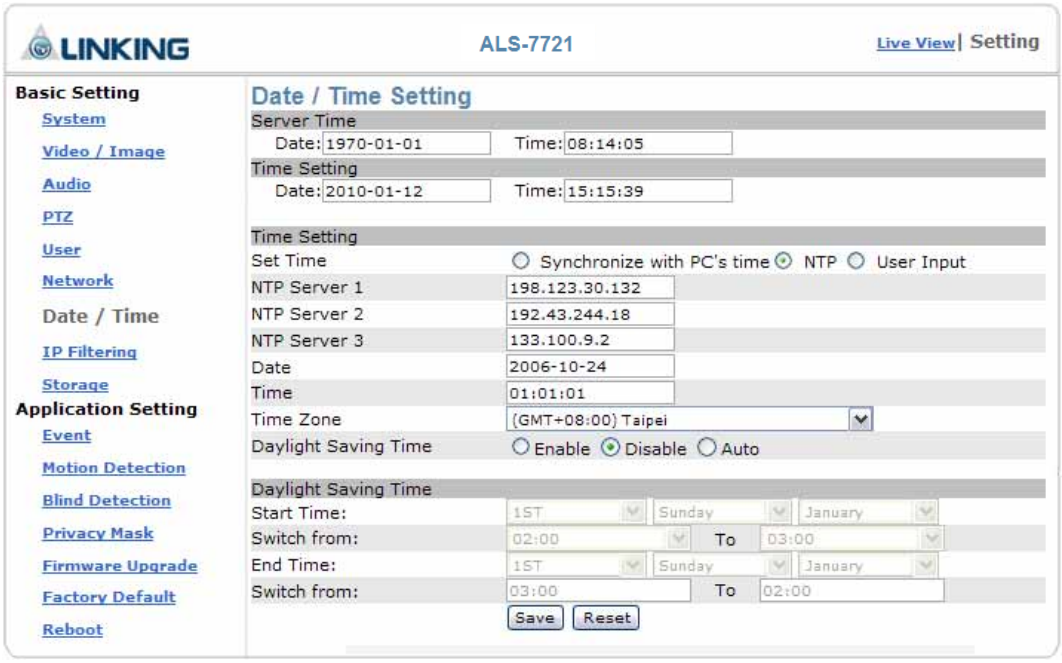
■ Basic Setting > Network > Multicast > Motion JPEG

This function allows multiple users to view the Motion JPEG video stream free from restrictions on the number of users. However, this is only effective within the LAN.



NOTE：
Please make reference to the chapter of **Appendix J: Multicast Application** for different environment description.

Basic Setting > Date/Time



- **Basic Setting > Date/Time > Server Time (the date/time of the server)**
- **Basic Setting > Date/Time > PC Time (the date/time of your PC)**
- **Basic Setting > Date/Time > Time Setting (date/time setting)**

There are three ways to synchronize the time.

1. **Synchronize the time with PC's time:**
   The preset method of time synchronization of the camera time with your PC time.

2. **Get Time from an NTP server: synchronize the time with the NTP (Network Time Protocol)**
   - Click on the "NTP" Button
   - Enter the NTP server's IP address.
   - Press "SAVE" to activate it.

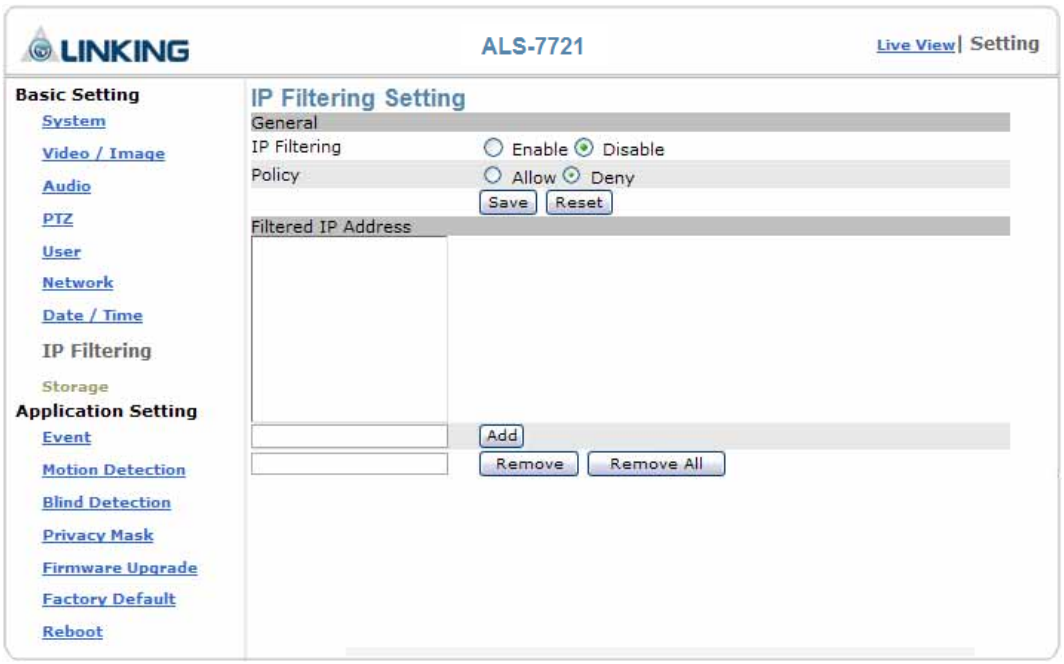
   The camera will update its time once obtaining the NTP time.

NOTE：
The default NTP servers are:
1. NTP Server 1: 198.123.30.132
2. NTP Server 2: 192.43.244.18
3. NTP Server 3: 133.100.9.2

3. **Change the time manually:**
   - Click the "User Input".
   - Select the format of date display, i.e. "yyyy/mm/dd" format.
   - Select the format of date display, "hh:mm:ss" by 24 hours format.
   - Select the time zone.
   - Select "Adjust" to adjust time.

Basic Setting > IP Filter

This function filters IP addresses and is able to allow or deny visits from particular addresses/target addresses.



■ Basic Setting > IP Filter > General

IP Filtering: Enables/disables the IP filter

Policy: Allows/denies access

■ Basic Setting > IP Filter > Filter IP Address (Overview of the set IPs)

Add: Enter the IP address you want to allow or deny the access of in the front field.

Remove: Removes a set IP addresses

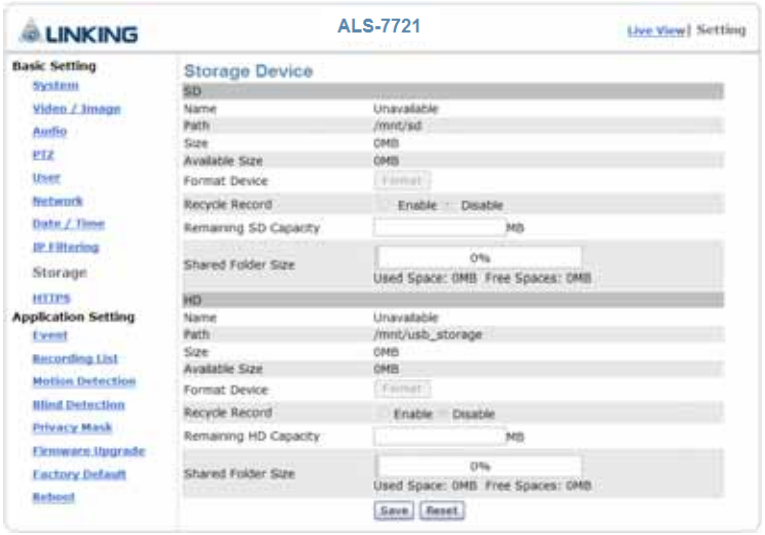
Remove All: Removes all the set IP address

Attention: Setting rules as below:

1. Actions that may cause a limited connection are to be denied.
2. Improper use of this function may cause disconnection from Internet. You might need to use hardware reset to reset to the factory default. Please refer to the “Factory Default” for details.

Basic Setting > Storage

This function can know the Storage information and format it.



■ **Basic Setting > Storage > SD**

Name: Device Type

Path: The fix path information and you can find the path through FTP service

Size: Total device size

Available Size: Available size

Format Device: Click **Format** button to format the storage device.

Recycle Record: Click the enable/disable selection to on/off the function

Remaining SD Capacity: The remaining capacity can be record.

Shared Folder Size (MB): The total capacity of the folder. Always remember to set the size of the folder to avoid exhaustion of disk capacity.

■ **Basic Setting > Storage > HD**

Name: Device Type

Path: The fix path information and you can find the path through FTP service

Size: Total device size

Available Size: Available size

Format Device: Click **Format** button to format the storage device.

Recycle Record: Click the enable/disable selection to on/off the function

Remaining SD Capacity: The remaining capacity can be record.

Shared Folder Size (MB): The total capacity of the folder. Always remember to set the size of the folder to avoid exhaustion of disk capacity.

NOTE：
When you insert the SD card/USE device, the storage information will appear after 5~10 second.

Application Setting

Application Setting > Event

This camera is equipped with intelligent security management functions. It ensures security monitoring by allowing user to define “trigger events” based on particular times and situations, and sets the camera respond to the event.

Application Setting > Event > Event Setting

■ **Application Setting > Event > Event List**

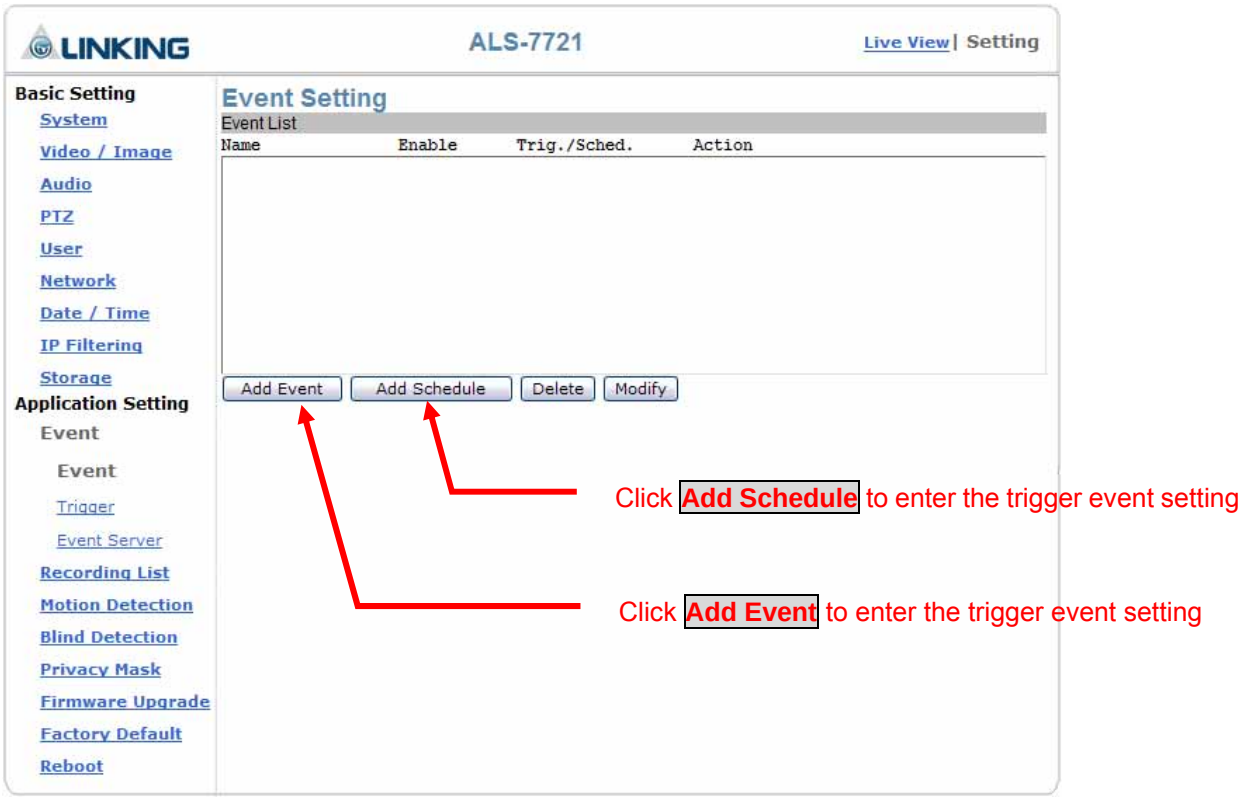
Add Event Add Event setting page

Add Schedule Add Schedule setting page

Delete Delete the event cluster setting.

Modify Modify the event cluster setting.

NOTE：
Suggest to avoid the Event Seeing over 5 item.



- **General:**

Name: Name the trigger event here, and input the length must from 1 to 24.

- **Response to event trigger: the time setting of the trigger event**

Always: Always monitoring

During time: Check the date you want to monitor (Sun~Sat) and the duration of monitoring here. For example, if you want to set the camera to monitor from 7 pm after work to 7 am next morning from Monday to Friday, check the boxes from Monday to Friday, enter “19:00” in the “Start From” field, and enter “12:00” in the “Duration” field.

Never: Don’t set up the time to the event setting.
Video Source: Select the video input source.

- **Trigger by: sources of trigger events (Note: You can only set one trigger event once.)**

Alarm input: The alarm is triggered by the security equipment connected from the DI terminals behind the machine, such as door/window detectors, infrared sensors.

Motion Detection: The alarm is triggered when motion is detected. The camera will send an alarm when any objects appear in the set detection area.

On Boot: The alarm is triggered by reboot. The camera will send an alarm when the system is rebooted due to power shortage, sabotage, or other reasons.

Video Loss: The alarm is triggered by video loss. The camera will send an alarm when the camera signal is loss due to power shortage, sabotage, or other reasons.

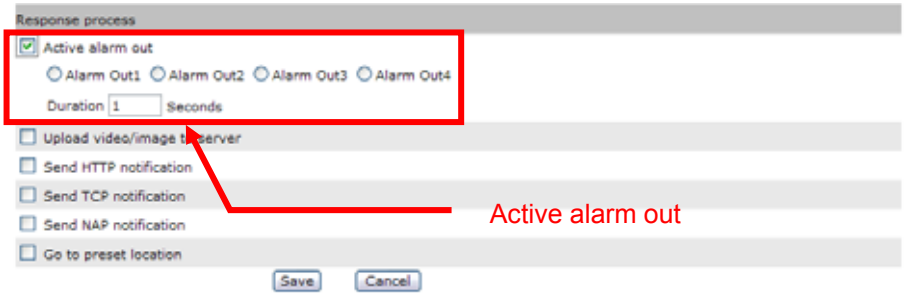
Blind Detection: The alarm is triggered when blind is detected. The camera will send an alarm when any objects disappear in the set detection area.

Net Loss: The alarm is triggered by net loss. The camera will send an alarm when the net is loss due to power shortage, sabotage, or other reasons.

NOTE：
The Add Event setting page and the Add Schedule setting page are basically the same except that the Add Schedule setting page does not have the option “Trigger by” and “Upload video/image to server” to indicate the sources of the trigger event.

Some function cannot enable some response process.

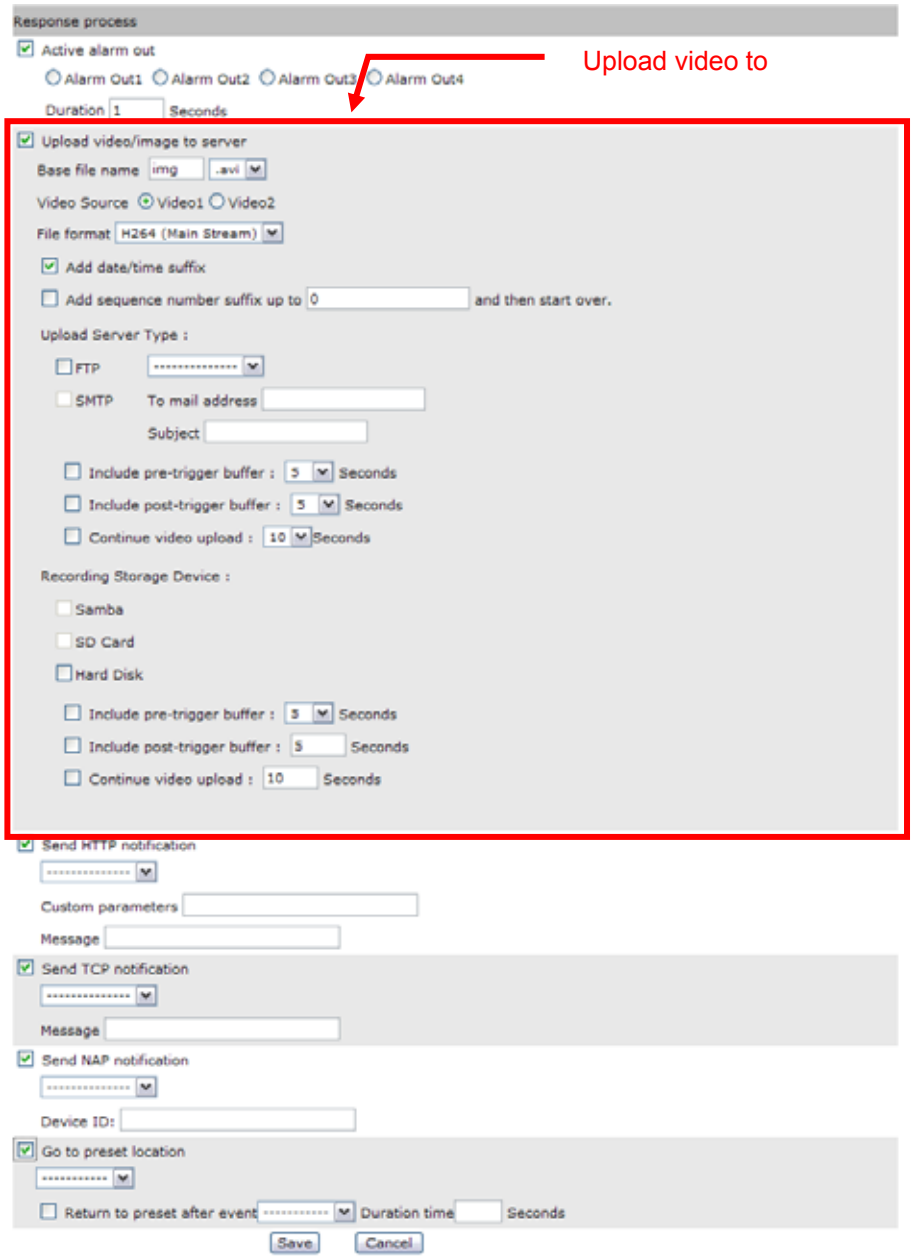
- **Response process: trigger event response (Note: Multiple selections are available)**



Active alarm out: An event is detected by the security equipment connected from the DI terminal behind the machine, such as high-decibel alarms, light projectors.

Alarm Out:
Select the Alarm input channel. ALS-7721 provides two Alarm Out selections.

Duration:
Set the device to work time, the range is the 1~9999.



Upload video/image to server : The IP camera will save the MJPEG/H264 picture or video of the event to the Upload Server (FTP/SMTP) or the Recording Storage Device (Samba/SD Card/Hard Disk). Please see the detail illustration as below:

Set up the Recording Filename Prefix/Suffix:

Set up the filename prefix/suffix by yourself, and the recording image will follow the setting to save the file.

Fixed **Manual (By Function)**

Event Type	Name	Date/Time Suffix	Seq-Number Suffix
Motion_	Img	YYMMDD_HHMMSS_mSS	_0.1.2.3…X. **Recycle**
Alarm_	img	YYMMDD_HHMMSS_mSS	_0.1.2.3…X. **Recycle**
Blind_	img	YYMMDD_HHMMSS_mSS	_0.1.2.3…X. **Recycle**

Base file name (Name):
Select the recording type: Picture (.jpg) or Image (.avi) then set the recording file name. The default value is the img (Name) and .avi (Recording Type).

Video Source:
Select the video input channel.

File format:
Select the streaming type to record the image: H.264 (Main), H.264 (Sub) and Motion JPEG.

Add date/time suffix (Date/Time Suffix):
Click the checkbox to enable/disable the function. The file will follow the fixed format to add the suffix (e.g. YYMMDD_HHMMSS_mSS). The sequence number can let the customer to define the file

NOTE：
The 1000m second is the 1 second.

Add sequence number suffix up to "XX" and then start over (Seq-Number Suffix):
Click the checkbox to enable/disable the function, and then input the sequence number to add to the recording image. The function can achieve the recycle record application.

The file will follow the fixed format to add the suffix (e.g. YYMMDD_HHMMSS_mSS).

Attention:
If the IP Camera not enable the Date/Time Suffix and Seq-Number Suffix, the recording image keep to use the same file name to record it.

e.g. The motion result

Trigger by = Motion / Type = .avi / Upload video to = FTP / The Seq-Number set the 5.

Disable all Suffix	Enable the Date/Time Suffix	Enable the Seq-Number Suffix
Motion_img.avi	Motion_img100221_161530_591.avi	Motion_img100221_161530_591_0.avi
	Motion_img100221_161723_184.avi	Motion_img100221_161723_184_1.avi
	Motion_img100221_161950_815.avi	Motion_img100221_161950_815_2.avi
	Motion_img100221_162143_358.avi	Motion_img100221_162143_358_3.avi
	Motion_img100221_162810_428.avi	Motion_img100221_162810_428_4.avi
	Motion_img100221_164505_001.avi	Motion_img100221_164505_001_0.avi
	.....	.....

Upload Server Type :
There are two upload server selections: FTP and SMTP (Mail).

FTP:
Refer the chapter: **Application Setting > Event > Event Servers (Upload Server)** to set the FTP server first to use this application. Click the checkbox to select the FTP server then click **Save** to finish the setting.

SMTP (Mail):
Refer the chapter: **Basic Setting > Network > SMTP Server (Mail Server)** to set the Mail server first to use this application. Click the checkbox to input the mail address and subject then click **Save** to finish the setting.

Recording Storage Device:
There is one recording storage device: Samba, SD Card and Hard Disk.

Samba:
Refer the chapter: **Basic Setting > Network > Samba** to set the Samba first to use this application. Click the checkbox to input the mail address and subject then click **Save** to finish the setting.

SD Card:
Refer the chapter: **Basic Setting > Storage** to format the device first to use this application. Click the checkbox to input the mail address and subject then click **Save** to finish the setting.

Hard Disk:
Refer the chapter: **Basic Setting > Storage** to format the device first to use this application. Click the checkbox to input the mail address and subject then click **Save** to finish the setting.

The different application will be used the different method to capture and record. Our company defines the general parameter to all service.

Record the image (.AVI)

Include pre-trigger buffer:

When an event is detected, the camera will record the previous video image up to 10 seconds.

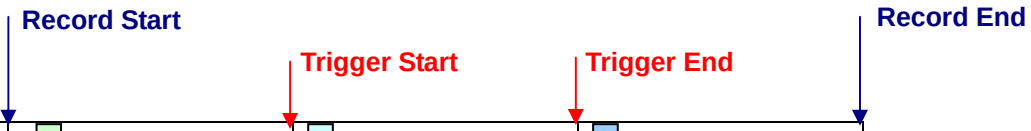
Include post-trigger buffer:

When an event is detected, the camera will record the post video image up to 10 seconds.

Continue video upload:

When the event is continue, the camera will record the video image up to 10 seconds.

NOTE：
Every default time setting is the 5 second.



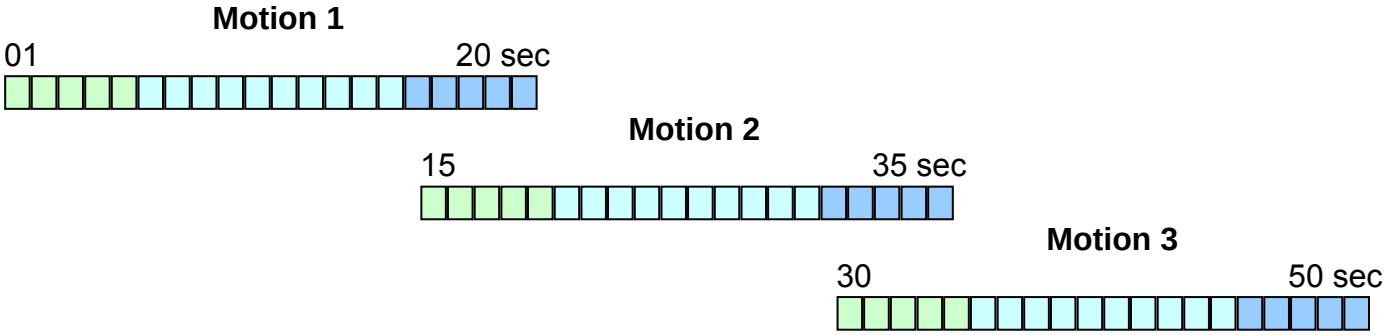
Type	Pre Record	Continue Record	Post Record
FTP	1~10 Second	1~10 Second	1~10 Second
Mail	1~10 Second	1~10 Second	1~10 Second
Samba	1~10 Second	1~10 Second	1~10 Second
SD Card	1~10 Second	1~10 Second	1~10 Second
Hard Disk	1~10 Second	1~10 Second	1~10 Second

When the event was triggered, the IP Camera will record the image. The IP Camera will auto record the previous image before trigger start and the post image after trigger end. According the distinct service, the previous/post recording time will be a little difference.

The continue record will keep to detect the event then record the image from the Trigger Start to the Trigger End.

The total recording time are Pre + Continue + Post recording time.

e.g. The continue motion result
Event Setting: Trigger by = Motion / **Type:** .avi / **Upload video to:** FTP
Include pre-trigger buffer: 5 sec / **Include post-trigger buffer:** 5 sec / **Continue video upload:** 10 sec



Capture the picture (.JPG)

Snapshot time offset: (ms)

The function is the time setting of previous/post snapshot. The valid range is from -10000 to 10000

Snapshot interval time: (ms)

The function is the time setting of interval snapshot. The valid range is from 0 to 1000000

Snapshot frames: (frames)

The function is the frames setting of snapshot. The valid range is from 1 to 999

NOTE：
The “ms” mean the -100 second. If the setting would be set the 60000ms, the result is the 1 min.

For example, the “Snapshot time offset” parameter was used the “-“. The ”-” parameter means previous capture the image.

-Snapshot Time Offset-

Capture Start

Trigger Start

Type	**Capture**			
FTP	1 Picture	**Snapshot Interval Time(-)**	1 Picture	**- - - - Snapshot Frames**
Mail	1 Picture	**Snapshot Interval Time(-)**	1 Picture	**- - - - Snapshot Frames**
Samba	1 Picture	**Snapshot Interval Time(-)**	1 Picture	**- - - - Snapshot Frames**
SD Card	1 Picture	**Snapshot Interval Time(-)**	1 Picture	**- - - - Snapshot Frames**
Hard Disk	1 Picture	**Snapshot Interval Time(-)**	1 Picture	**- - - - Snapshot Frames**

When the event was triggered, the IP Camera will continue to capture the pictures. The total frames will follow all setting to send the picture.

e.g. The continue motion result
Event Setting: Trigger by = Motion / **Type:** .jpg / **Upload video to:** FTP
Include Snapshot time offset: -1000 ms / **Include Snapshot interval time:** 1000 ms / **Snapshot frames:** 5

For example, the “Snapshot time offset” parameter was used the “+“. The ”+” parameter means post capture the image.

-Snapshot Time Offset-

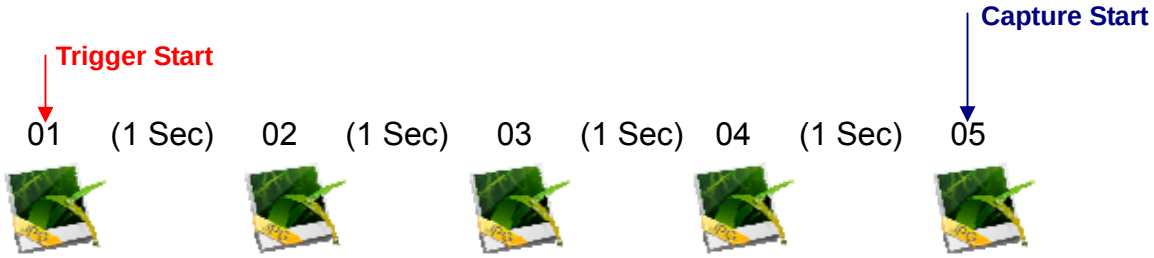
Capture Start

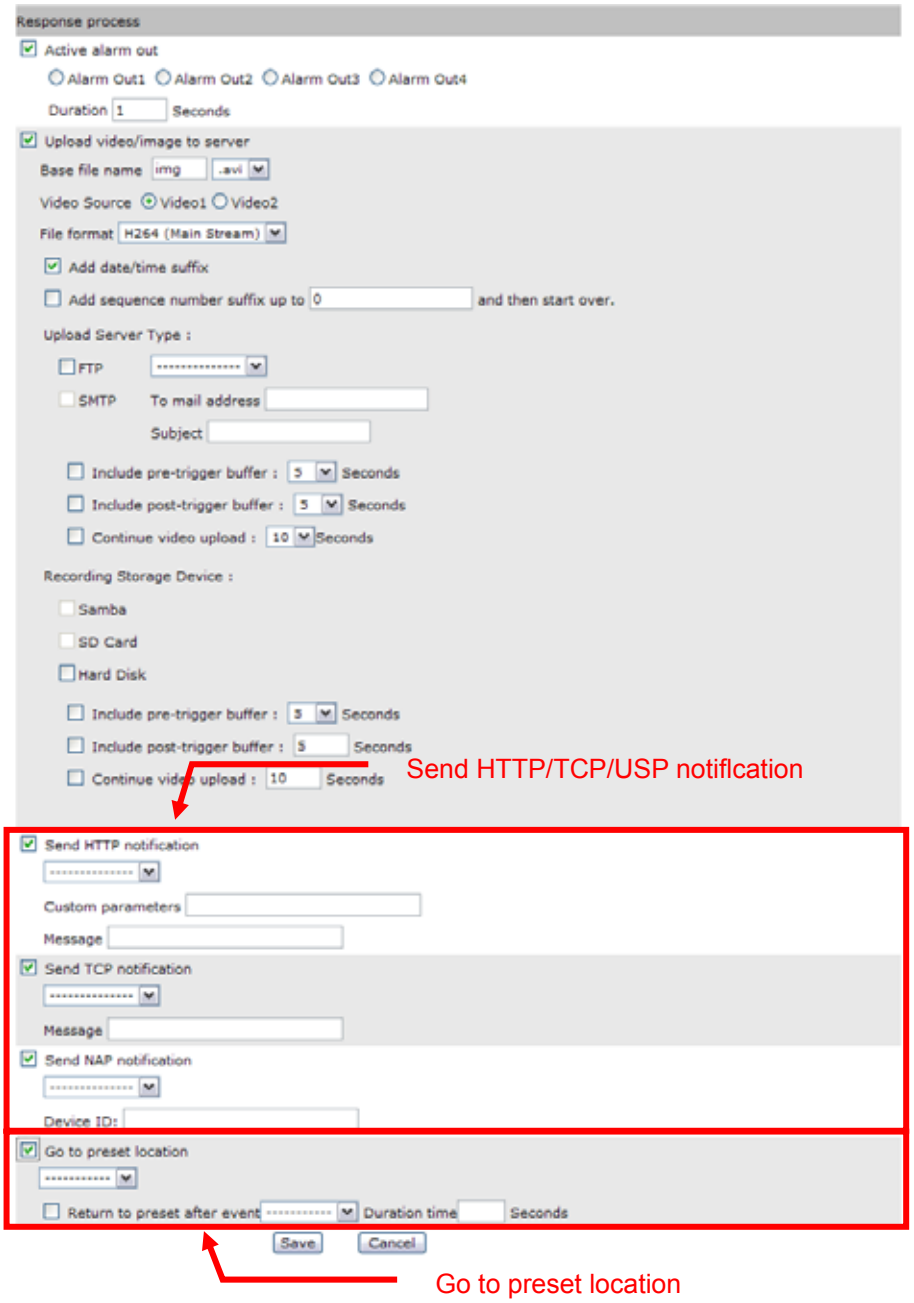
Trigger Start

Type	Capture			
FTP	1 Picture	**- - - - Snapshot frames**	1 Picture	**Snapshot interval time(+)**
Mail	1 Picture	**- - - - Snapshot frames**	1 Picture	**Snapshot interval time(+)**
Samba	1 Picture	**- - - - Snapshot frames**	1 Picture	**Snapshot interval time(+)**
SD Card	1 Picture	**- - - - Snapshot frames**	1 Picture	**Snapshot interval time(+)**
Hard Disk	1 Picture	**- - - - Snapshot frames**	1 Picture	**Snapshot interval time(+)**

When the event was triggered, the IP Camera will continue to capture the pictures. The total frames will follow all setting to send the picture.

e.g. The continue motion result
Event Setting: Trigger by = Motion / **Type:** .jpg / **Upload video to:** FTP
Include Snapshot time offset: 1000 ms / **Include Snapshot interval time:** 1000 ms / **Snapshot frames:** 5





Send HTTP notification: The alarm will be sent to the HTTP server you specified. To use this function, set the coordinative HTTP server in the Event Server setting page in advance.

Send TCP notification: The alarm will be sent to the TCP Server you specified. To use this function, set the coordinative TCP server in the Event Server setting page in advance.

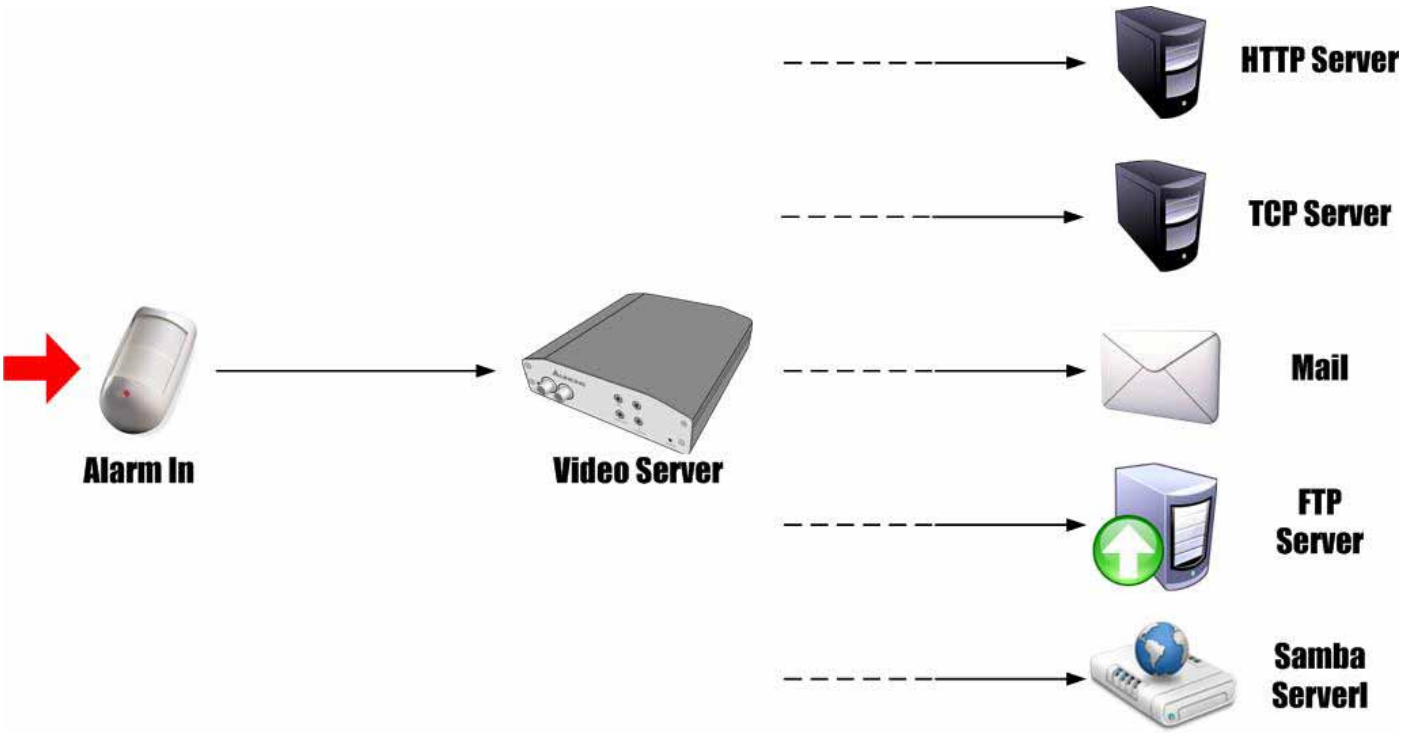
Send TCP notification: The alarm will be sent to the NAP Server you specified. To use this function, set the coordinative NAP server in the Event Server setting page in advance.

Go to preset location: Move to the location you specified when a trigger event occurs. To use this function, set the present location of the product in the main page in advance.

Click **Save** to save and activate your settings when you completed setting.

Application Setting > Event > Trigger (Manual test the response)

Whenever the camera detects abnormal events during the scheduled time, it will automatically respond by performing trigger response. There are 2 types of trigger responses: alarm sending and emailing the alarm or recorded image to the specified server. To use this function, enter the server information by accessing Application Setting > Event > Event Server. You may perform manual test as specified in this section once you complete the setting to ensure that all functions are working properly.

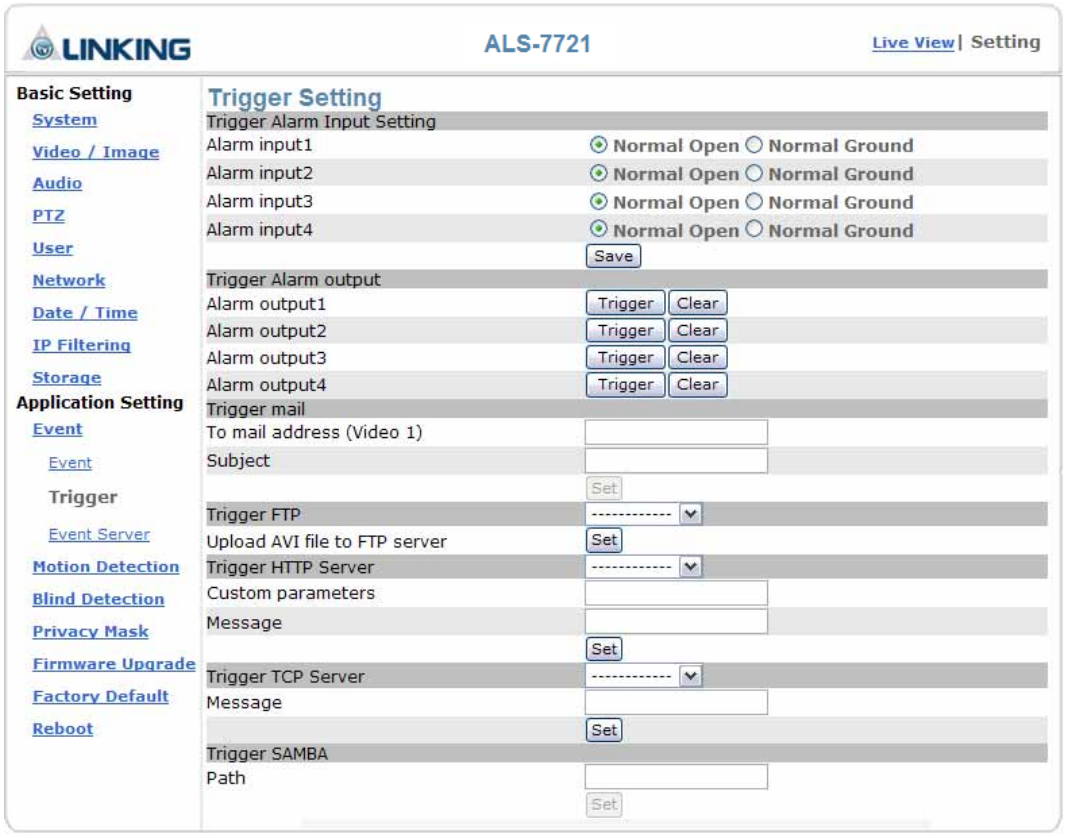


The default status of the digital input pin is set as “Normal Open”, but users can change it to “Normal Ground” by setting the page “Setting > Application > Event > Trigger”:

1. When alarm input is set to be “Normal Open”, then the external device connected to alarm input pin should be in open status. So when the external device is triggered to close status, the alarm input pin will be triggered.

2. On the contrary, when alarm input pin is set to be “Normal Grounded” then the external device connected to alarm input pin should be in close status. So when the external device is triggered to open status, the alarm input pin will be triggered.
   (Please refer **Appendix B: External Alarm** A for detailed explanation.)

NOTE：
It is recommended to set up the Trigger Setting page (Setting-> Application Setting-> Event-> Trigger) before install the hardware alarm I/O!



■ **Application Setting > Trigger > Alarm Input Setting**

Change the alarm input type: N.O.(Normal Open) or N.G. (Normal Ground). The N.G. means N.C.

■ **Application Setting > Trigger > Trigger Alarm output:**

Click “Trigger” to trigger the alarm. Click “Clear” to stop the alarm. (Please make sure to click “Clear” for close the alarm testing when the trigger testing is done).

■ **Application Setting > Trigger > Trigger mail**

Click “Set” after you enter the email address and subject to test the integrity of the sent mail.

■ **Application Setting > Trigger > Trigger FTP**

Upload AVI files to FTP server to test the file integrity.

■ **Application Setting > Trigger > HTTP Server**

Upload message to HTTP server to test the message integrity. Enter the message in the “Message” field. You may go to Application Setting > Event > Event Server to make a complete custom parameters settings.

■ **Application Setting > Trigger > TCP Server**

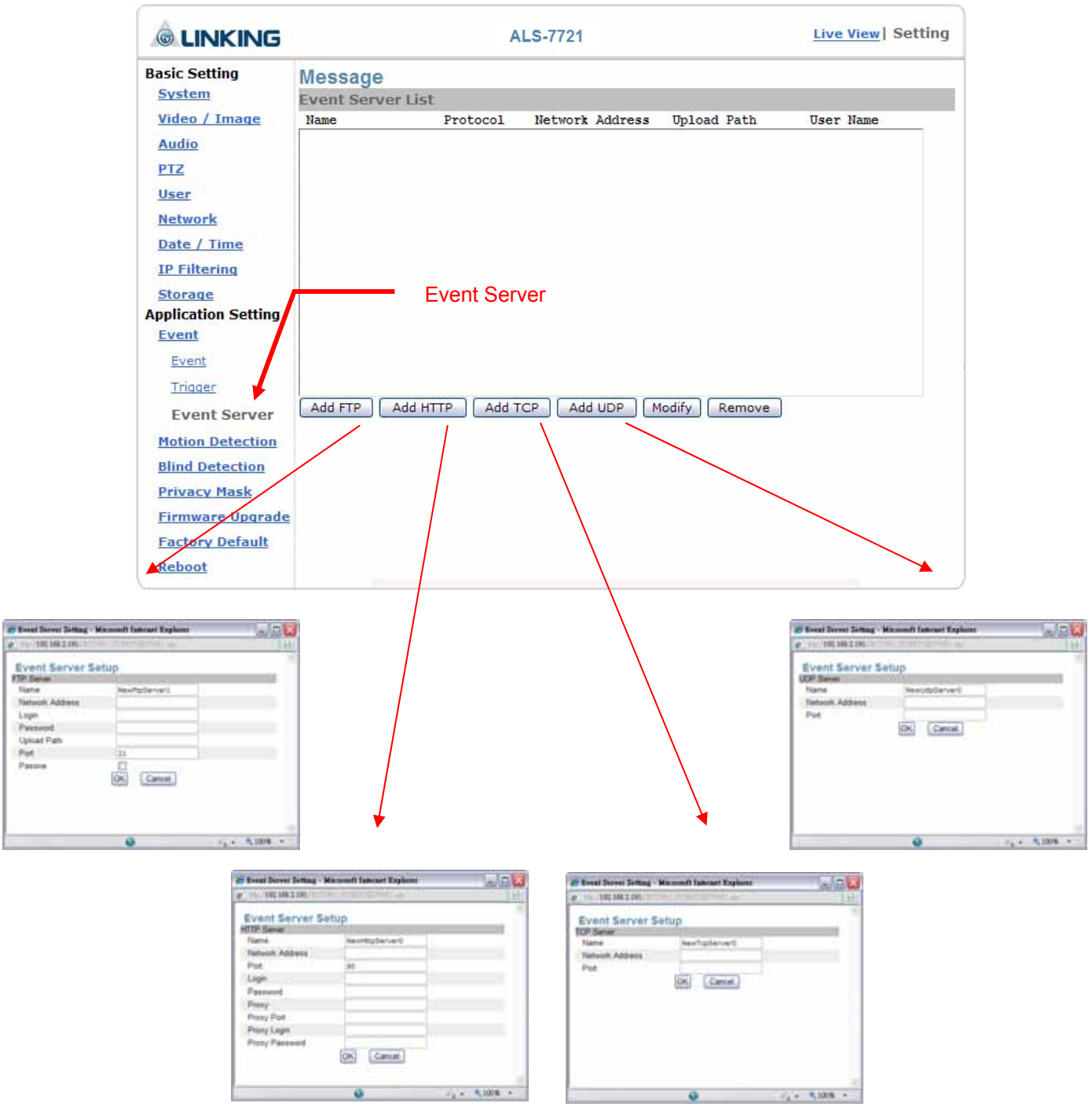
Enter the message in the “Message” field.

■ **Application Setting > Trigger > Trigger SAMBA**

Path: Enter the path of the shared folder in your PC.

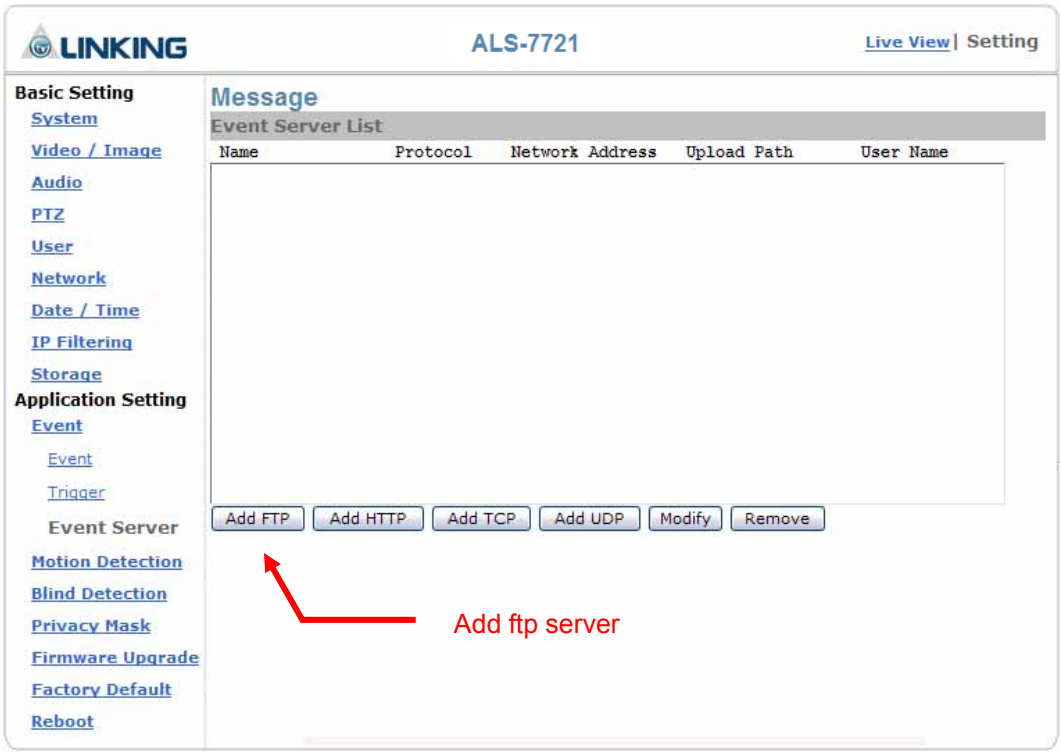
Application Setting > Event > Event Servers (Upload Server)

Here you can perform a complete setting for uploading files to the server. Please set servers (FTP…etc) in the Event Server setting by the instructions below:



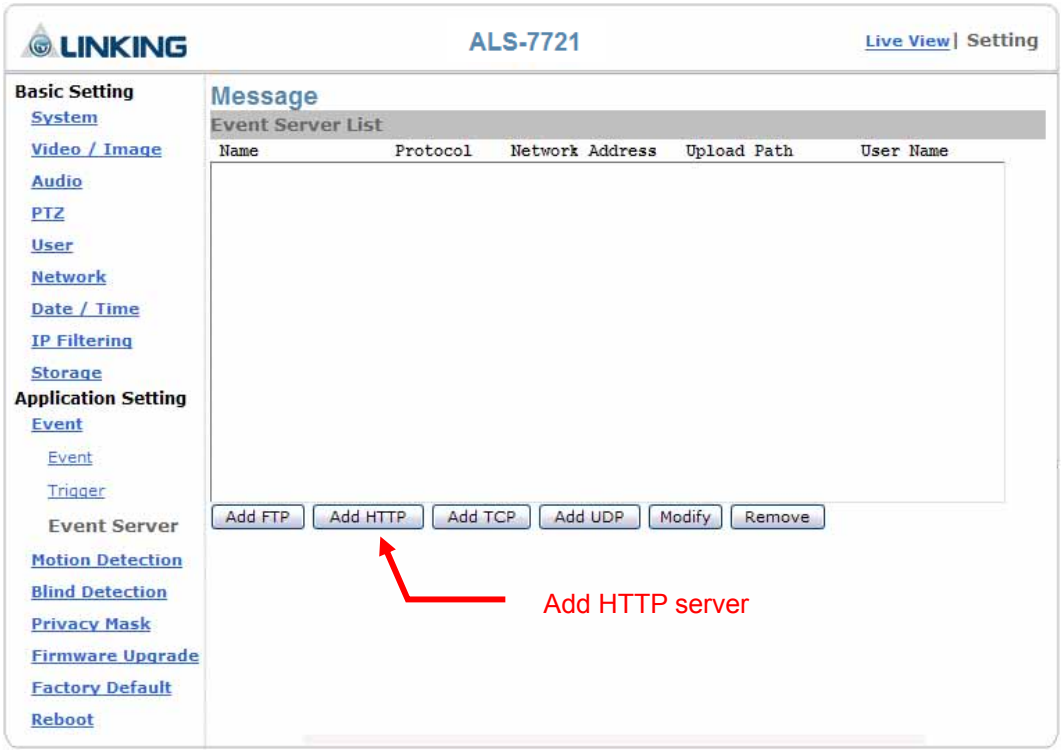
■ **Application Setting > Event > Event Server > Event Server List**

Add Ftp Enter the information of the FTP server you specified.



Name: The name of the FTP
Network Address: IP address of the FTP
Login: Log-in name
Password: Log-in password
Upload Path: Uploading path
Port: Port
Passive: Check to set the FTP status as passive

Add Http Enter the information of the HTTP server you specified.

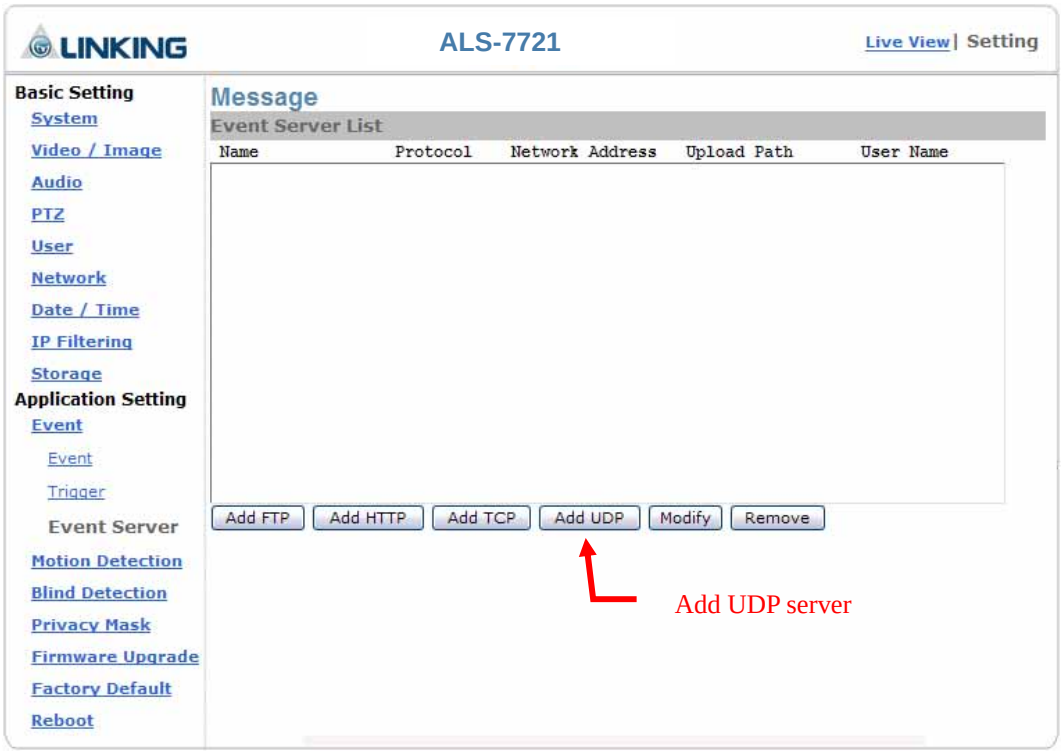


Name: HTTP name
Network Address: HTTP IP address
Login: Log-in name
Password: Log-in password
Proxy: Proxy server name
Proxy Port: Proxy server port
Proxy Login: Proxy server log-in name
Proxy Password: Proxy server log-in password

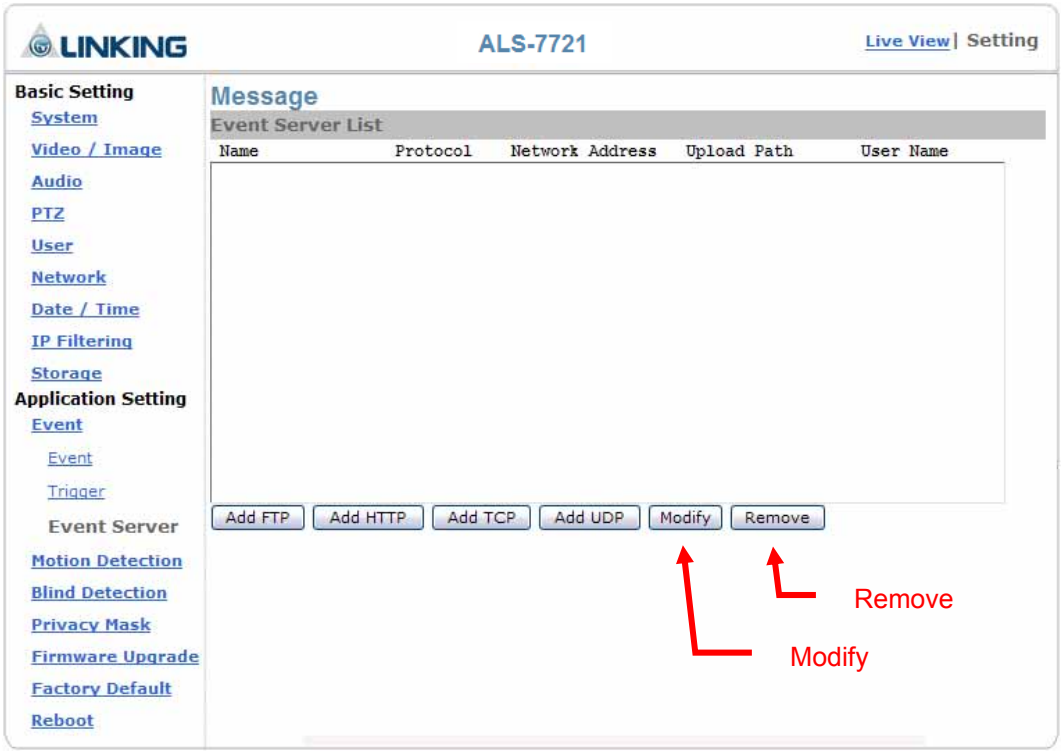
Add TCP Enter the information of the TCP server you specified.

Name: TCP server name
Network Address: TCP IP address
Port: TCP port

Add UDP Enter the information of the UDP server you specified.



Name: UDP server name
Network Address: UDP IP address.
Port: UDP port

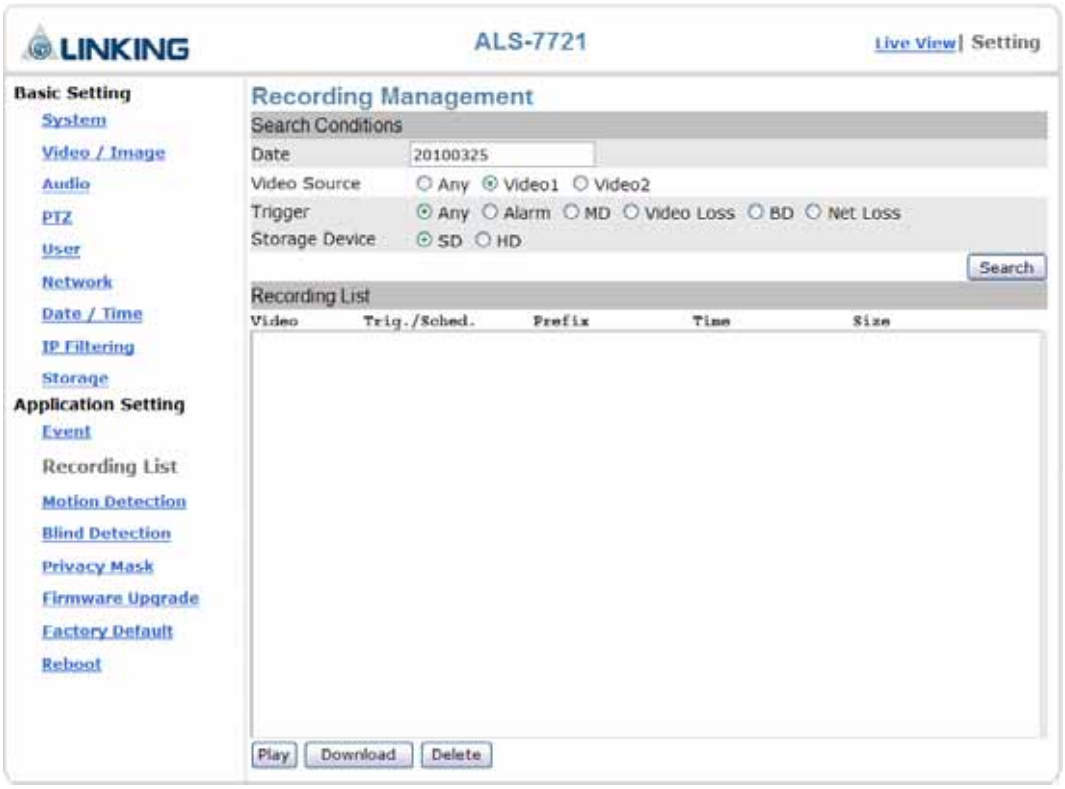


Modify Modifies the setting value

Delete Removes the setting value

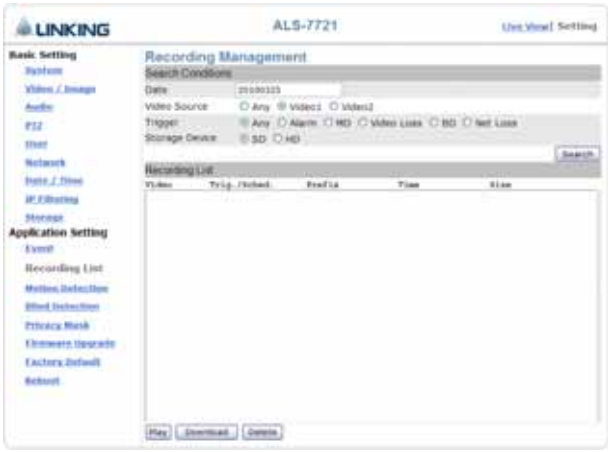
Application Setting > Recording List

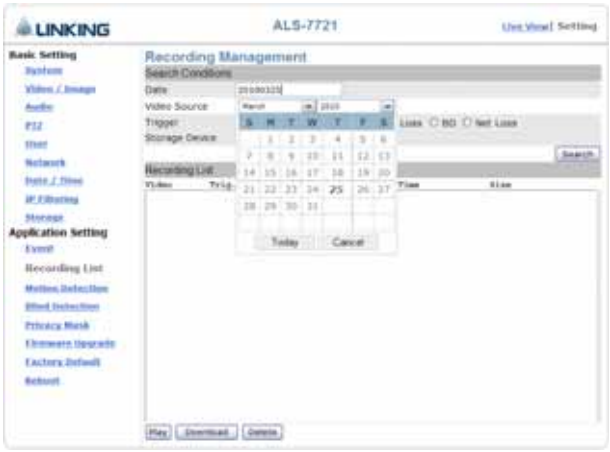
The function can provide the smart search method to find the SD Card / External HDD recording image easily and comfortably. Please see the detail illustration as below:



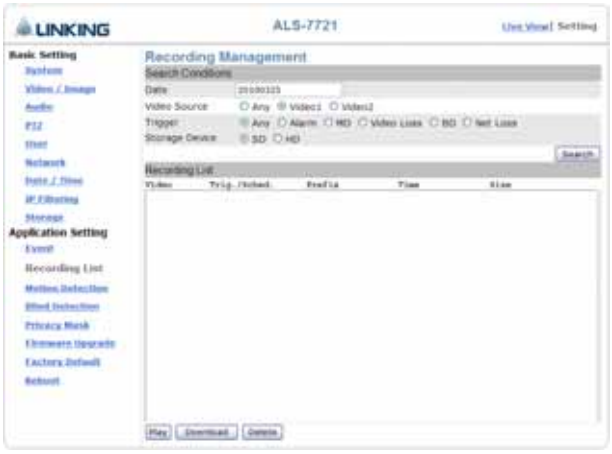
■ Application Setting > Recording List > Search Conditions

Date:
Click the date to display the Calendar information. Select the date to search the recording image.

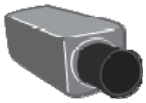




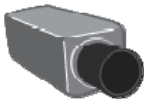
Video Source:
According to the video server type, select the Video 1, Video 2 or Both Video to search the recording image.



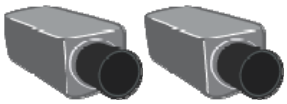
Video 1



Video 2



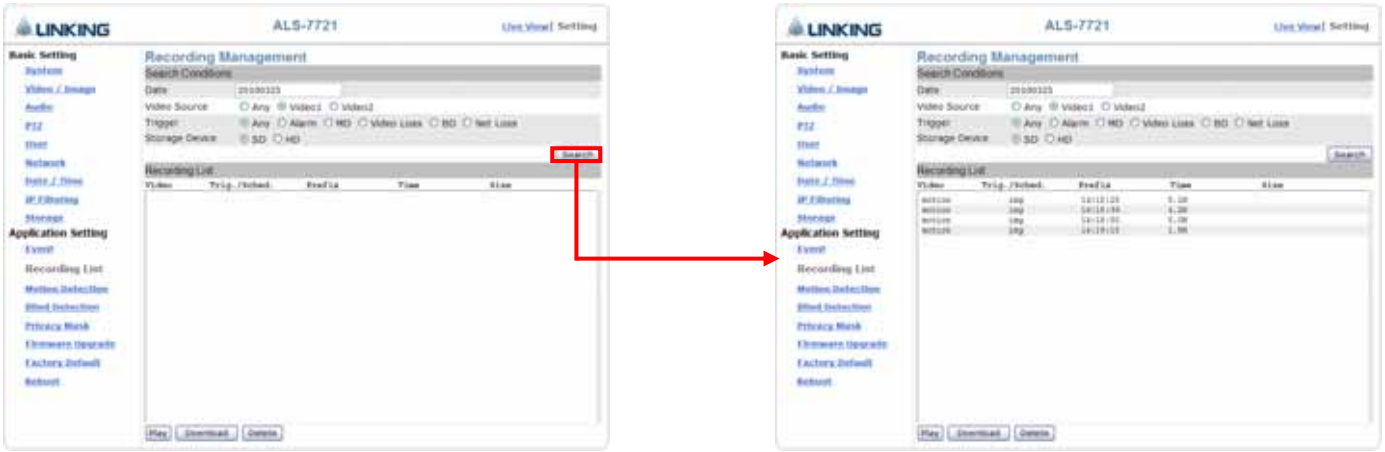
Both Video



Trigger:
There are seven kinds of trigger type: Any, Alarm, MD (Motion Detection), Video Loss, BD (Blind Detection) and Net Loss. Because of the recording image is according some setting to save it, select the search conditions through these types.

Storage Device:
Select the storage device is SD (SD Card) or HD (Hard Disk).

Search:
According to the searching condition (e.g. Video Source, Data, Trigger and Storage Device), click **Search** button to search the storage device file, and all result will display the recording list.

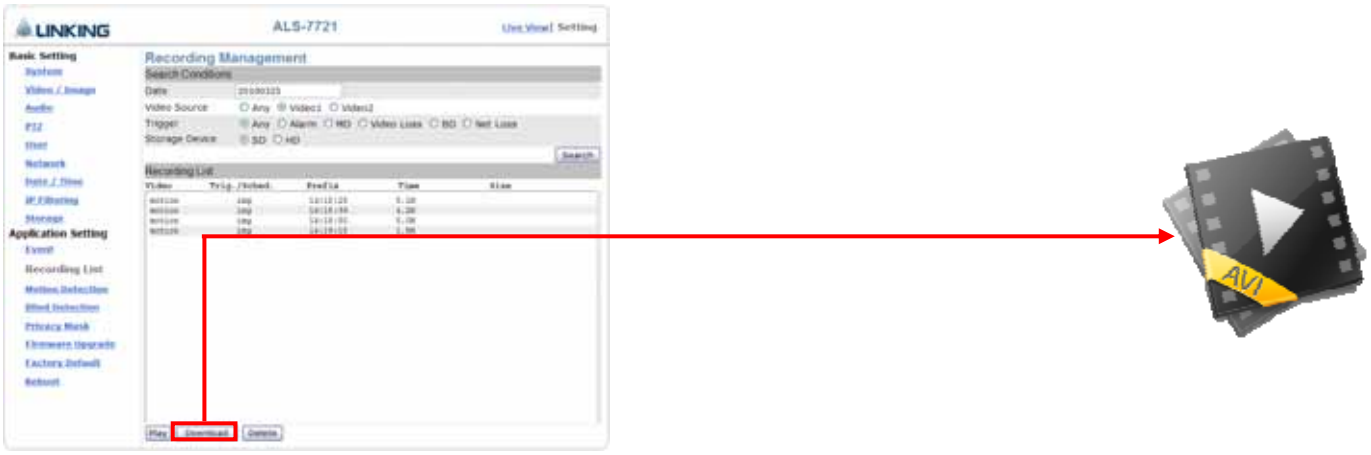


■ **Application Setting > Recording List > Recording List**

Display the result to recording list after click **Search** button.

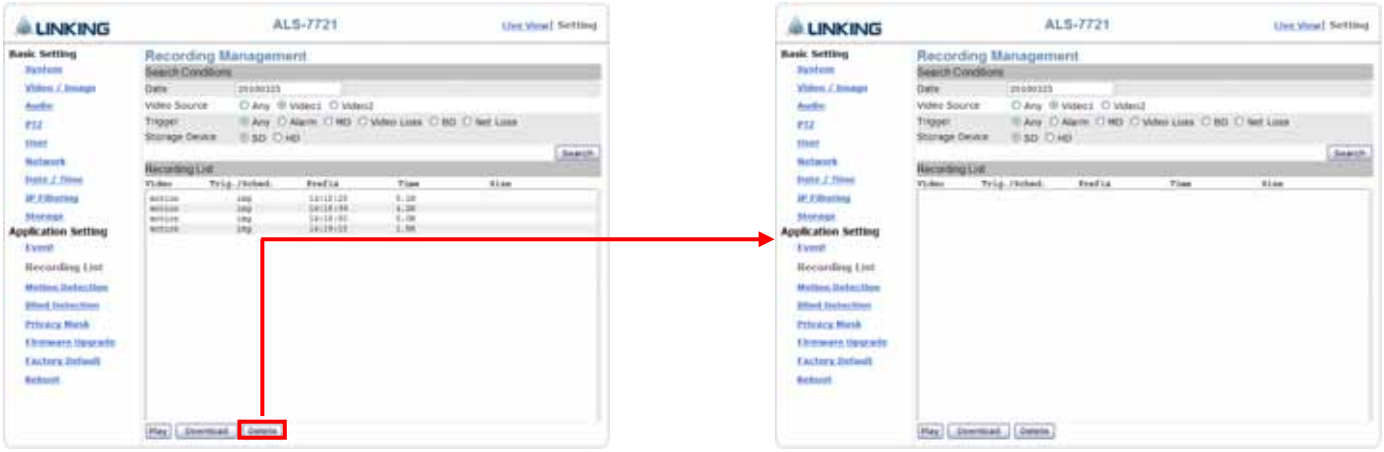
Download:

Select the recording file then click **Download** button to download it.



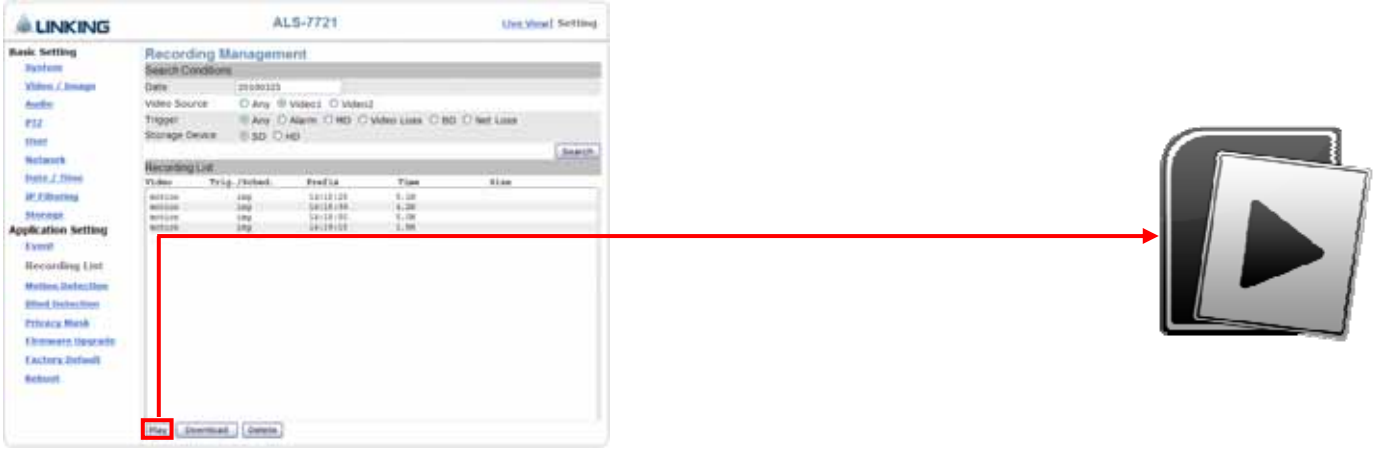
Delete:

Select the recording file then click **Delete** button to delete it from the list.



Play:

Select the recording file then click **Play** button to play it through ActiveX Media Player.



Application Setting > Motion Detection

Open the setting frame by clicking on the area to monitor. To move area to monitor, drag the area with your mouse; to adjust the size of the frame, drag the arrow to adjust after you move the mouse to the edge of the area and left-click.

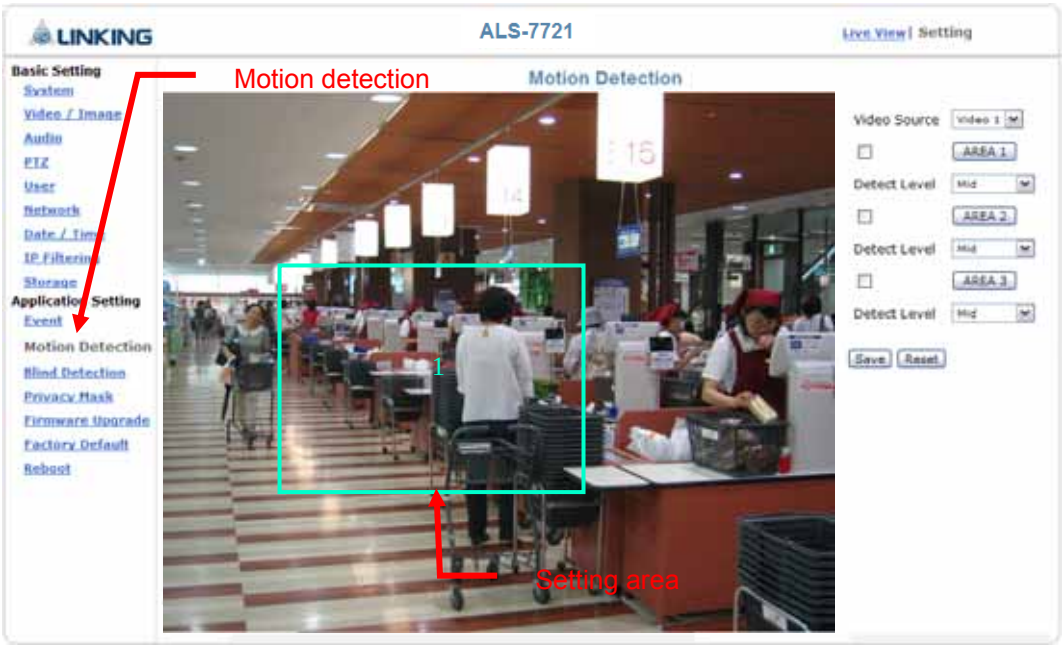
Area:

There are 3 frames available for setting: Area 1, Area 2 and Area 3. Click **AREA** button to open the detection area then click the signal checkbox to enable the function.

Detect Level:

Adjust the Sensitive of the area by entering the degree of sensitivity in the “Detect Level” field. The setting range is from 0 to 100. “0” is least sensitive, “100” is extremely sensitive.

Select **Save** to complete and activate your settings.



Application Setting > Blind Detection

The bland detection means the inside/outside area detection. When the inside/outside object can be move to leave/enter the area, the function will be trigger.

Open the setting frame by clicking on the area to blind. To move area to monitor, drag the area with your mouse; to adjust the size of the frame, drag the arrow to adjust after you move the mouse to the edge of the area and left-click.

Area:

There are 3 frames available for setting: Area 1, Area 2 and Area 3. Click **AREA** button to open the detection area then click the signal checkbox to enable the function.

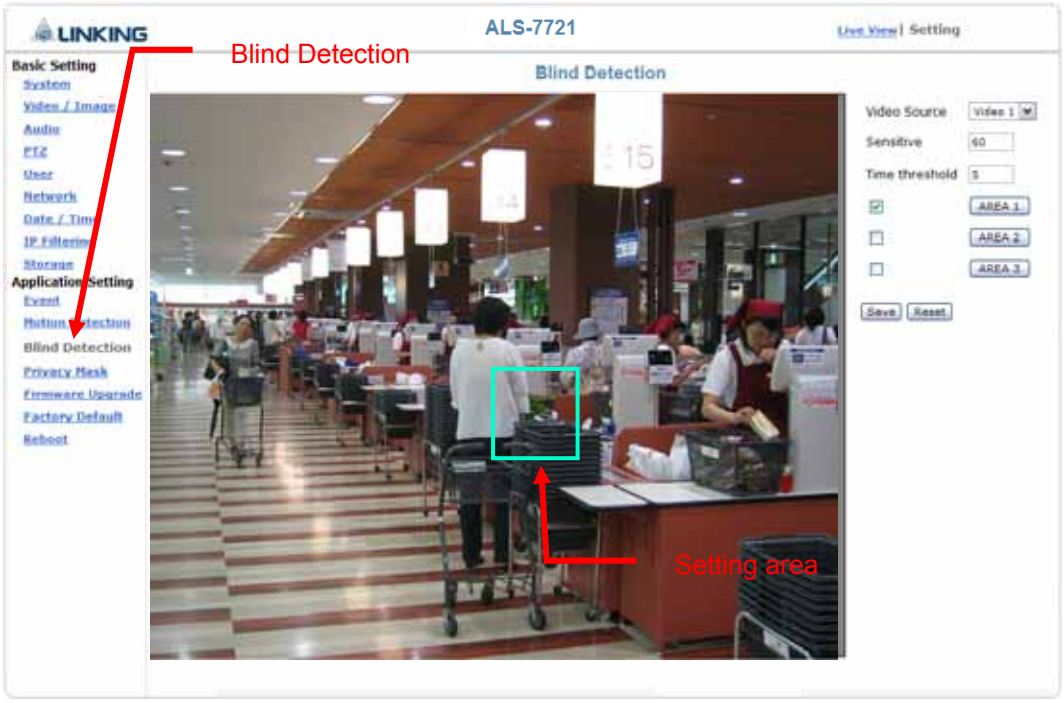
Sensitive:

Adjust the Sensitive of the area by entering the degree of sensitivity in the “Sensitive” field.
The setting range is from 0 to 100. “0” is least sensitive, “100” is extremely sensitive.

Time threshold:

Adjust the stay time to detect the object in the area.
The setting range is from 0 to 100 seconds.

Select **Save** to complete and activate your settings.



Application Setting > Privacy Maskv

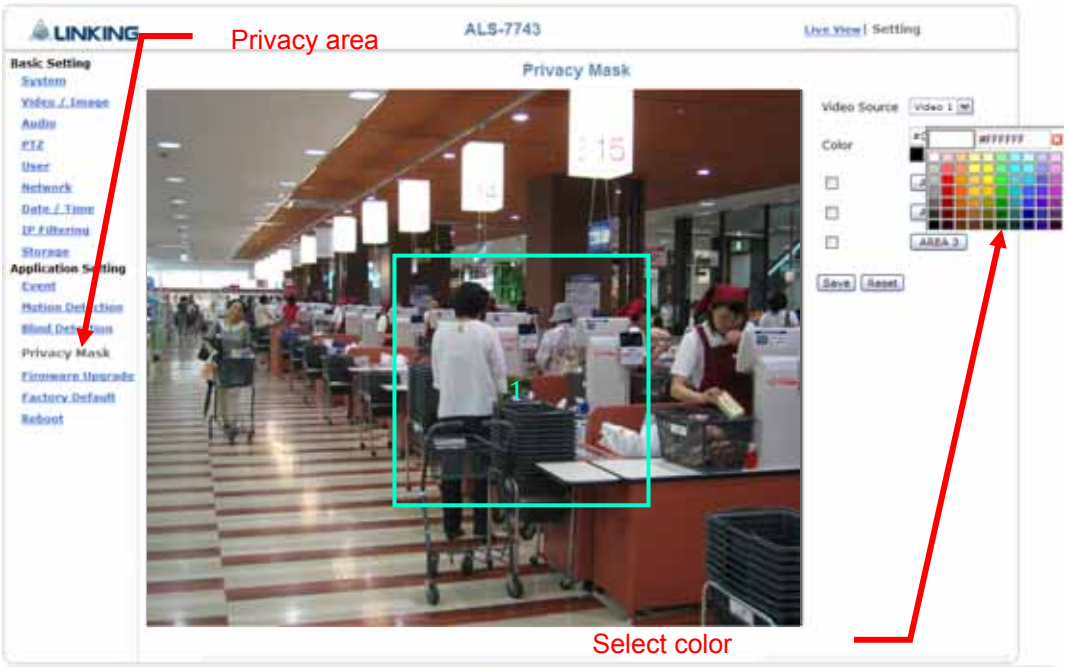
The privacy zone function can mask the image in the mask zone to ensure confidentiality. First, select a mask zone (1 to 3) and a mask color in the privacy zone. Then, move the green frame to the area you want to mask. Moving the cursor to the bottom right corner of the frame can change the size of the frame. When the setting is completed, click Save to make the setting effective, and the screen will automatically refresh within a few seconds after the setting is effective.

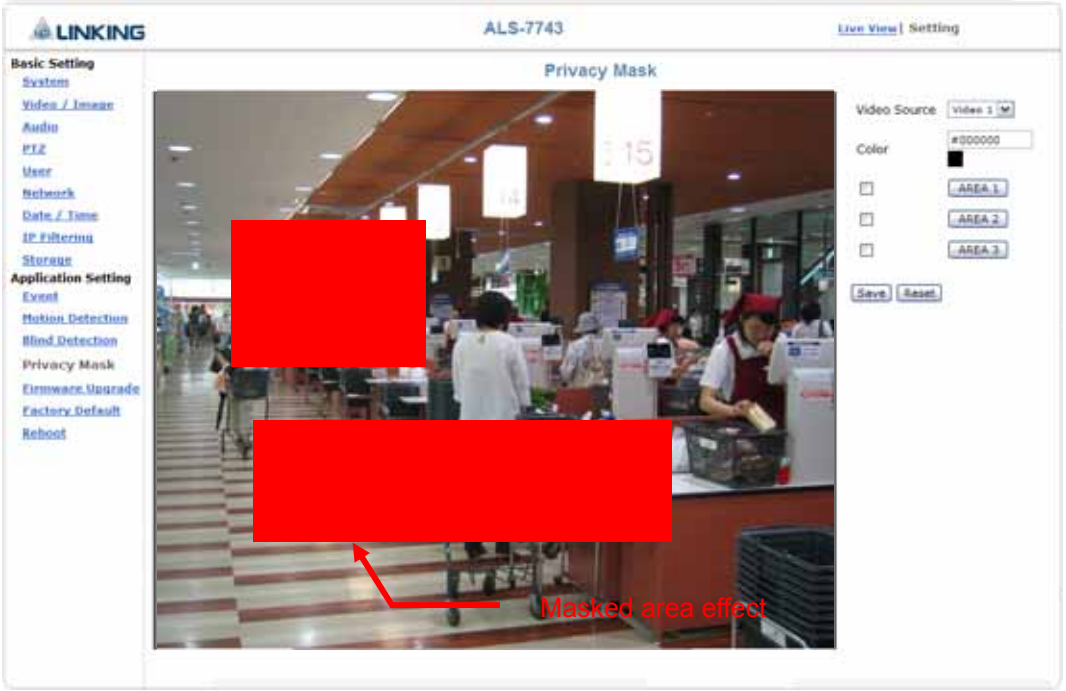
Color:

Click the black color to select the color from color-cord table, or input the color-cord to change the color.

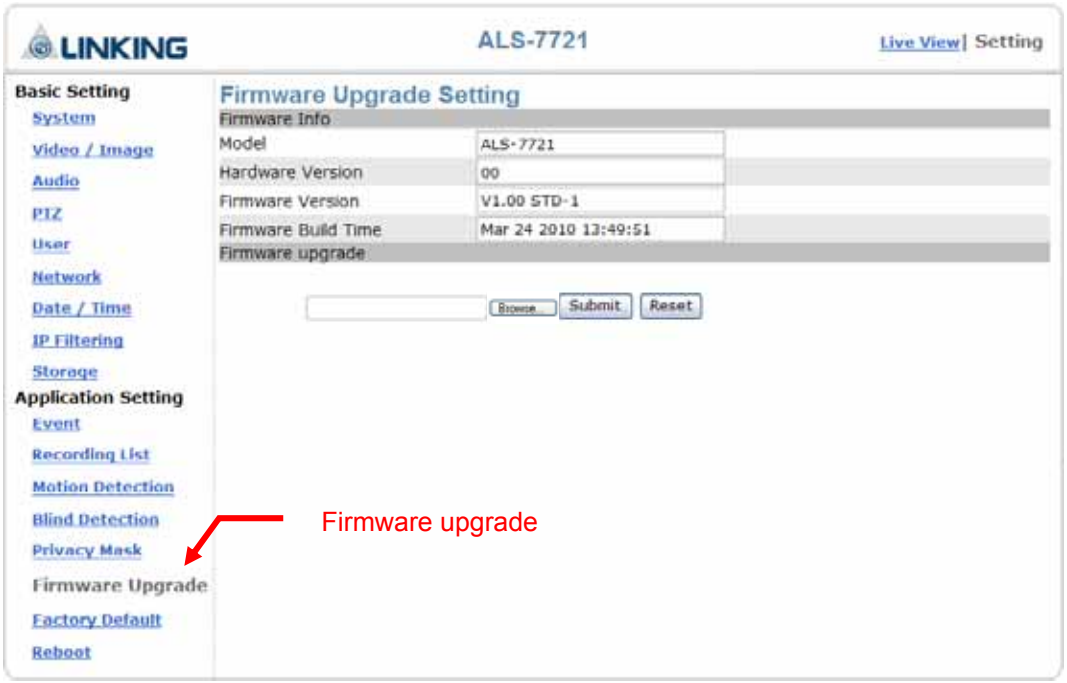
Area:

There are 3 frames available for setting: Area 1, Area 2 and Area 3. Click **AREA** button to open the Privacy Mask area then click the signal checkbox to enable the function.





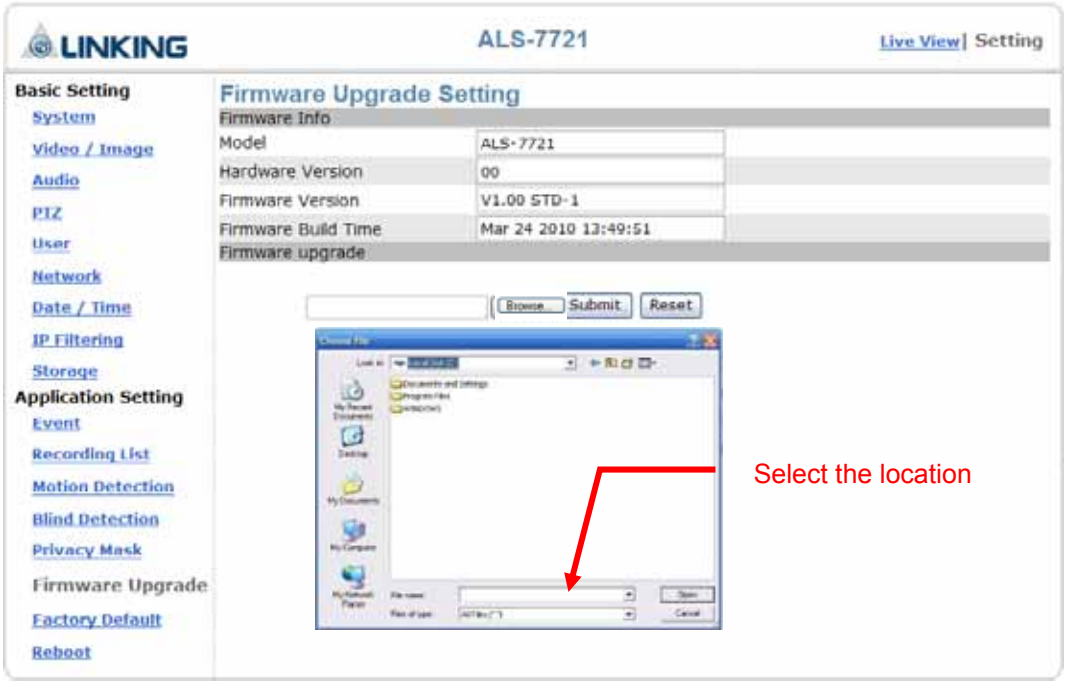
Application Setting > Firmware upgrade



Contact your dealer for more information about firmware upgrade. Please follow the steps below to execute the upgrade.

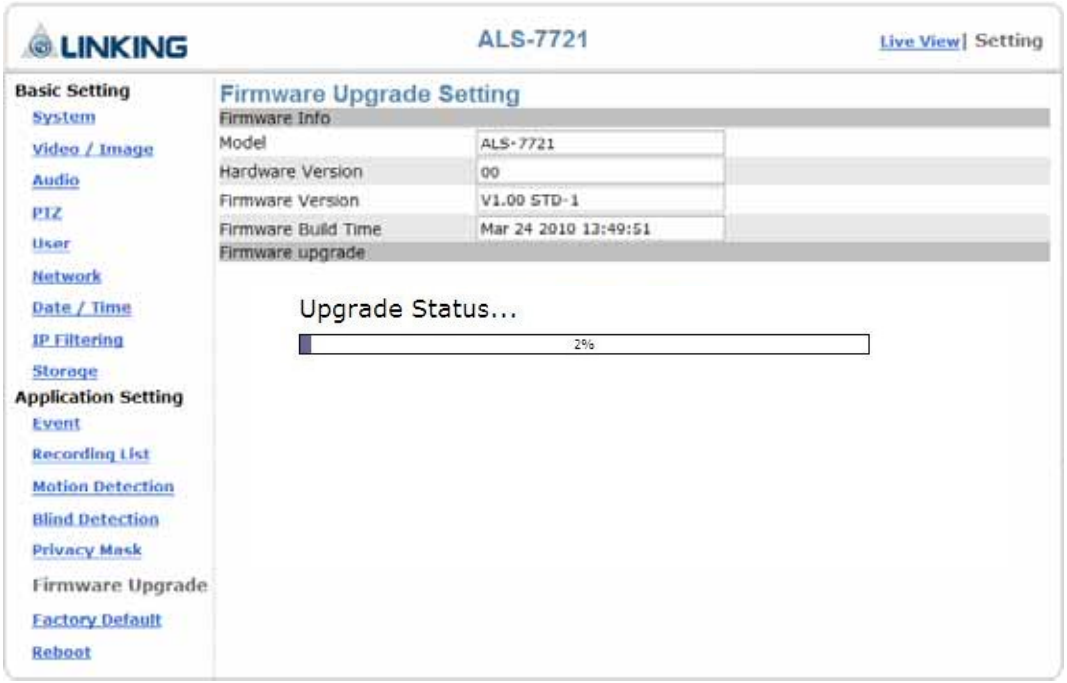
Attention: Important! Read Carefully!!

1. Close all active applications on your PC.
2. Select “Firmware Upgrade”. The Firmware Upgrade Setting page will appears.

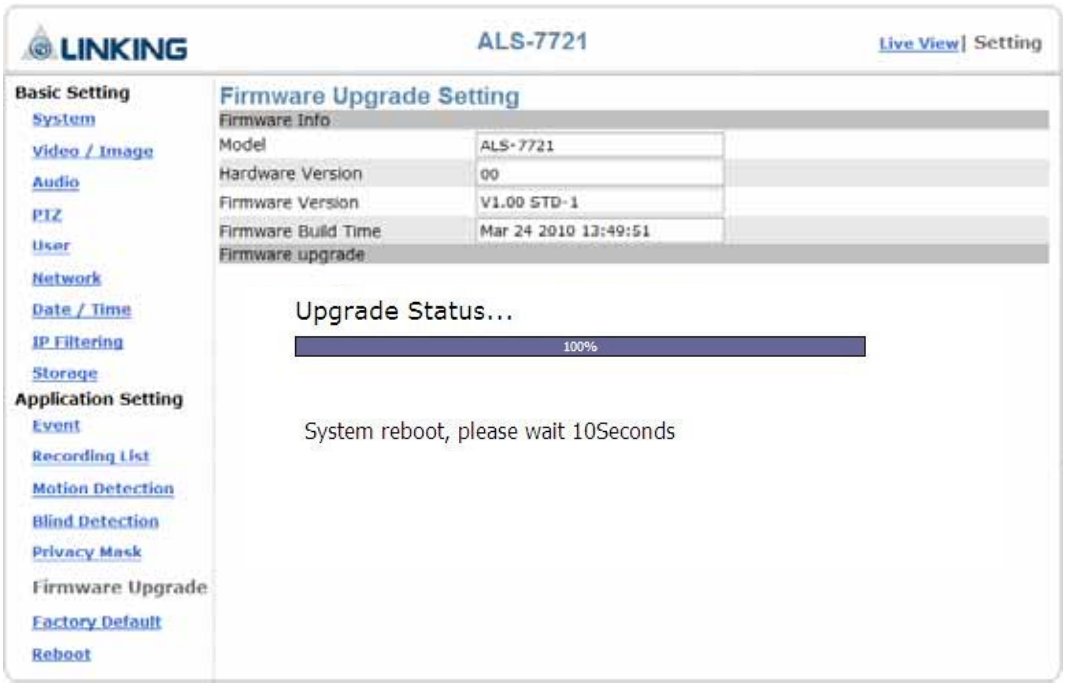


3. Click **Browse...** to select the location where the firmware file is stored.
4. Click **Submit**.

5. The auto upgrade runs. The Upgrade Status shows the progress of the upgrade.



6. When the firmware upgrade has been completed, the machine reboots automatically. Reconnect to the server after 60 seconds.



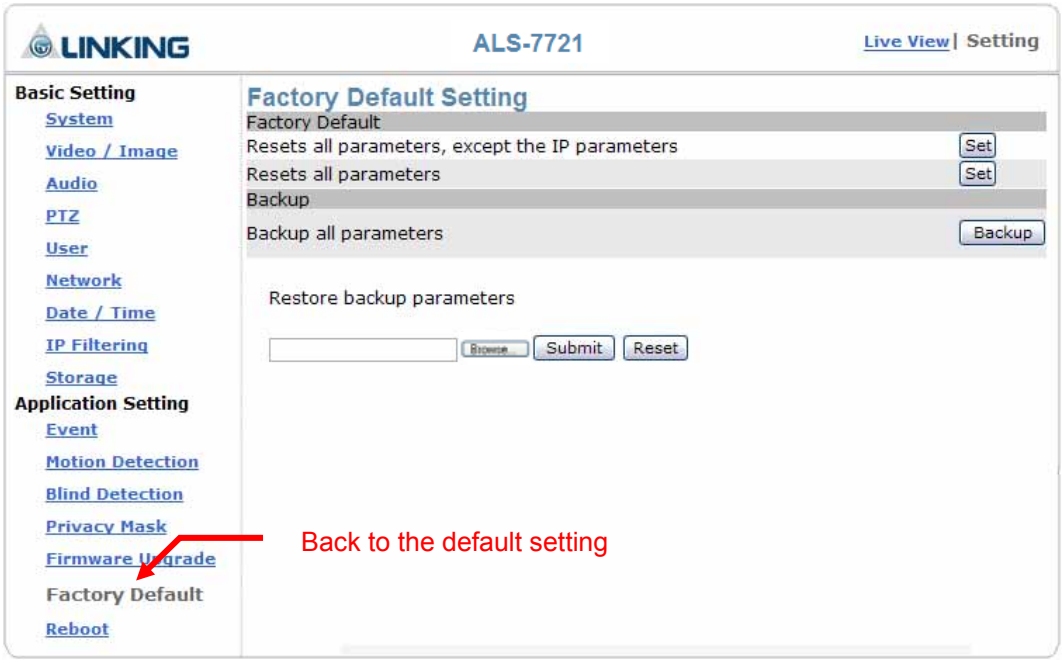
NOTE：

The new firmware is burned into the Flash ROM during the upgrade, so you must take care during the process and make sure it is not interrupted during the operation. The system may be damaged seriously and need to be returned to the factory for repair if the power cable is removed or becomes loose during the upgrade. Firmware upgrading in a wireless network environment is not recommended because unstable packet transmission may bring about loss of data.

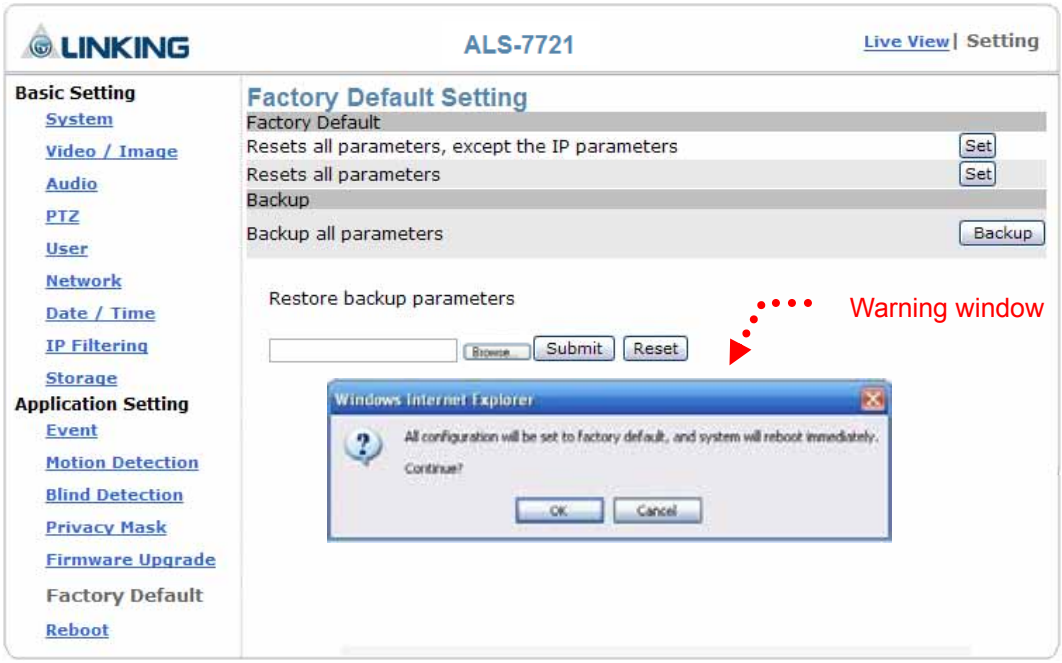
When the firmware upgrade has been completed, you don't need to restart the camera manually. The camera will reboot automatically after 60 seconds (Reboot OK). Then open the IE browser and key in the IP address (The original IP address remains undeleted).

Application Setting > Factory Default

You can use this function to reset to factory default, but all changes, including the IP address, you have made are deleted.



■ **Application Setting > Factory Default > Factory Default**



Resets all parameters, except the IP parameters:

You can use this function to reset to factory default. All changes you have made are deleted but the IP address and all settings relevant to networking remain valid, including cable and wireless network settings. Click **Set** to complete the reset.

Resets all parameters:

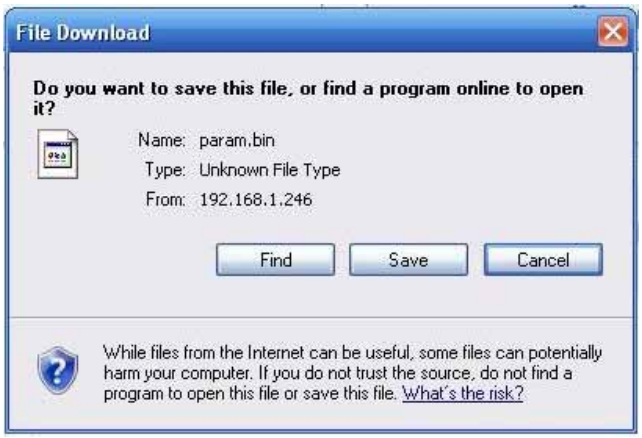
You can use this function to reset to factory default. All changes, including the IP address, you have made are deleted. Click **Set** and a warning window appears to ask if you really want to reset to factory default. Click “OK” to complete the reset.

■ Application Setting > Factory Default > Backup

Back all parameters:

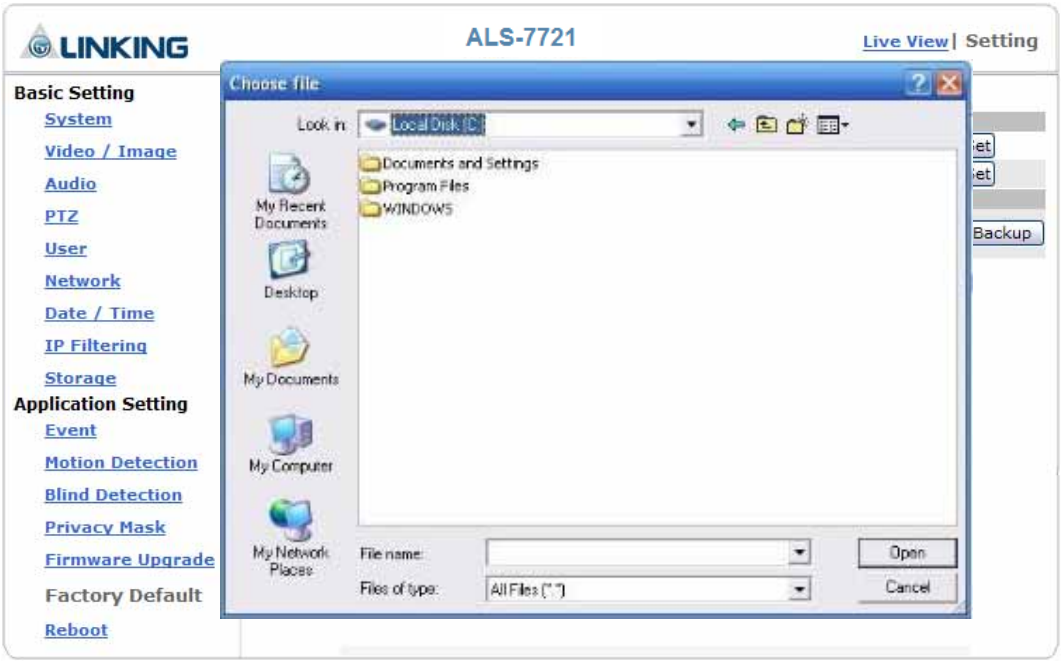
Back up all changes you have made. When you click **Backup**, a file download window appears. Back up the file named param.bin

Attention: Don't change the file name; otherwise, the backup may fail.



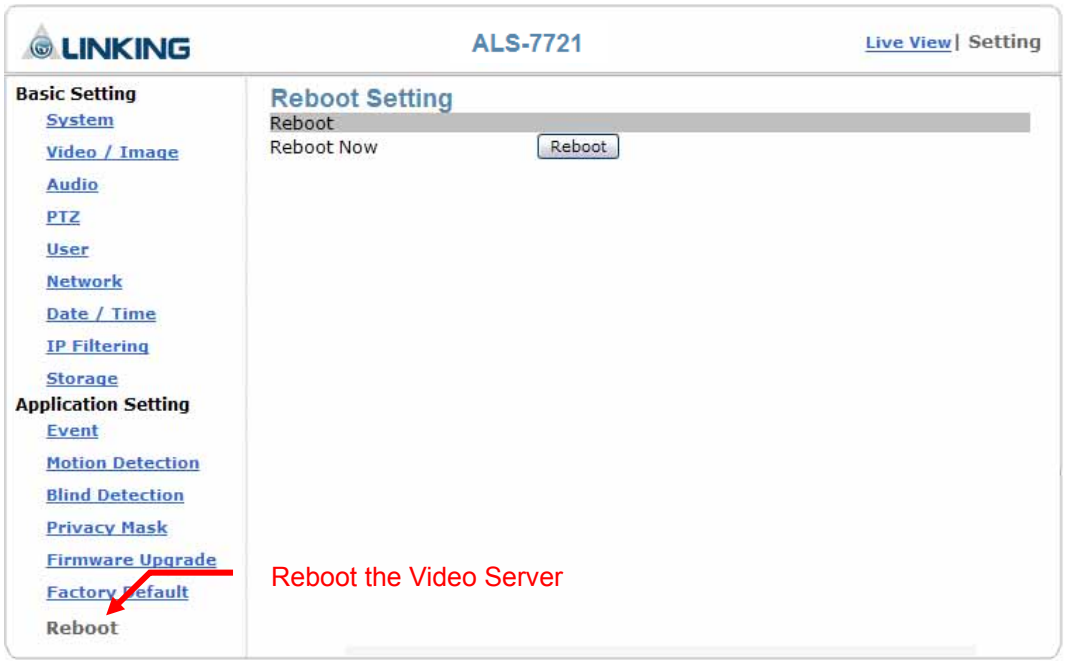
Restore backup parameters:

You can select this function to restore the changes you have made. To do this, click **Browse...** to select a backup file and click **Submit** to confirm the restoration.



Application Setting > Reboot

Enable this function for the camera to reboot automatically.



Appendix A: System Requirements

Before installing ALS-7721, please make sure your system has the following recommended minimum hardware requirements.

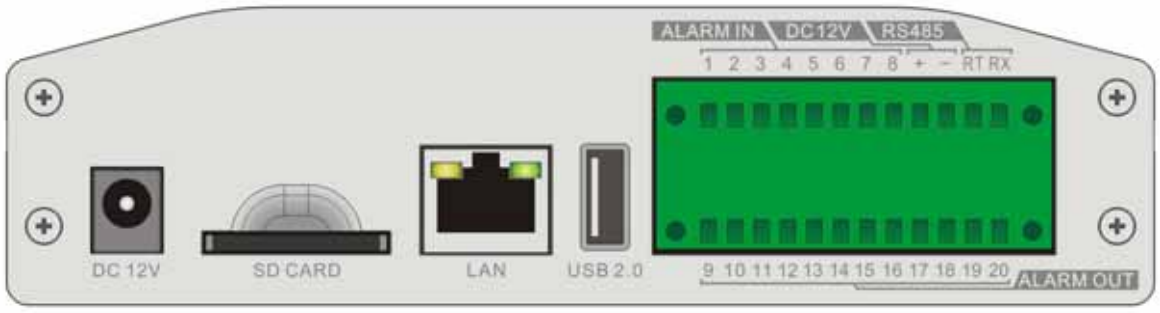
Minimum System Requirements

ALS-7721	
Internet Environment	
Ethernet	10/100M Ethernet
Monitor System Requirements	
OS support	Windows 2000, XP, Vista and 7
Browser support	Internet Explorer 6.x or later
Hardware	CPU: Pentium 4 2.4 GHz or later Memory: 512 MB (1 GB recommended) VGA card resolution: 1024 x 768 or higher

Appendix B: External Alarm & RS485

In addition to the motion detection executed by the internal software application, the product can connect to external infrared detectors, beepers, and smoke detectors. For more information about these external devices, contact to your local retailer, dealer or installation service provider. This product provides a standard Alarm I/O for you.

This product is provided with 4 x DI (Digital Input), 4 x DO (Digital Output), 1 x external DC12V and 1 x RS485, please see the detail illustration as below:



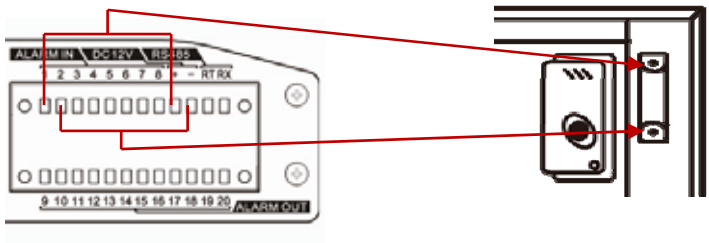
Pin	Function	Pin	Function
01	Alarm Input 01:#1 (A) Max DC 50V	13	Alarm Output 09:#1 (N.C.)
02	Alarm Input 02:#1 (K)	14	Alarm Output 10:#1 (COM) Max DC24V1A
03	Alarm Input 03:#2 (A) Max DC 50V	15	Alarm Output 11:#1 (N.O.)
04	Alarm Input 04:#2 (K)	16	Alarm Output 12:#2 (N.C.)
05	Alarm Input 05:#3 (A) Max DC 50V	17	Alarm Output 13:#2 (COM) Max DC24V1A
06	Alarm Input 06:#3 (K)	18	Alarm Output 14:#2 (N.O.)
07	Alarm Input 07:#4 (A) Max DC 50V	19	Alarm Output 15:#3 (N.C.)
08	Alarm Input 08:#4 (K)	20	Alarm Output 16:#3 (COM) Max DC24V1A
09	DC12V: ＋ (100 mA)	21	Alarm Output 17:#3 (N.O.)
10	DC12V: － (100 mA)	22	Alarm Output 18:#4 (N.C.)
11	RS485 RT: Transmit Date	23	Alarm Output 19:#4 (COM) Max DC24V1A
12	RS485 RX: Receive Date	24	Alarm Output 20:#4 (N.O.)

Attention: Please do not connect the Pin 09 and Pin 10 to other devices. Incorrect connection may cause short circuit and damage to the camera and people.

ALARM INPUT：

The extra device connects one for the Alarm Input (A), and the other for Alarm Input (K). Due to ALS-7721 has the protection mechanism, obtain the power supply for your alarm equipment by connecting from Pin 09 and Pin 10.

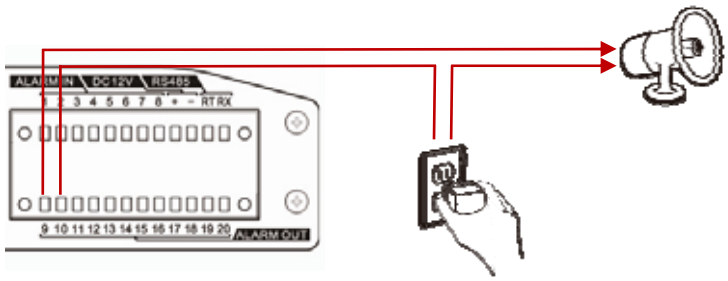
Attention: The Pin 09 and Pin 10 can only provide the 100mA power to other device. If the devices need to get the more power from ALS-7721, it will show down or broke.



ALARM OUTPUT：

The extra device connects one for Alarm Output (N.C.) or Alarm Output (N.O.), and the other for Alarm Output (COM).

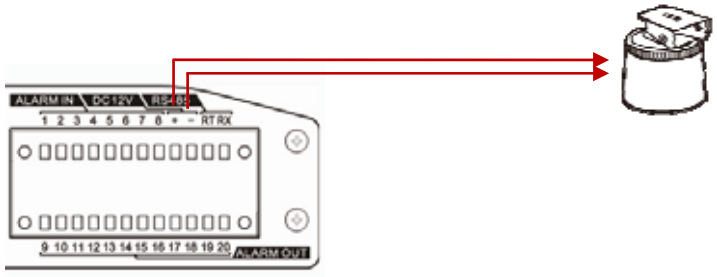
Connect the power adapter through COM to provide electric power. When alarm trigger, the alarm output will work.



NOTE：
After the alarm device set up finish, enable the function from ALS-7721. Please make reference to the chapter of **Application Setting > Event > Trigger.**

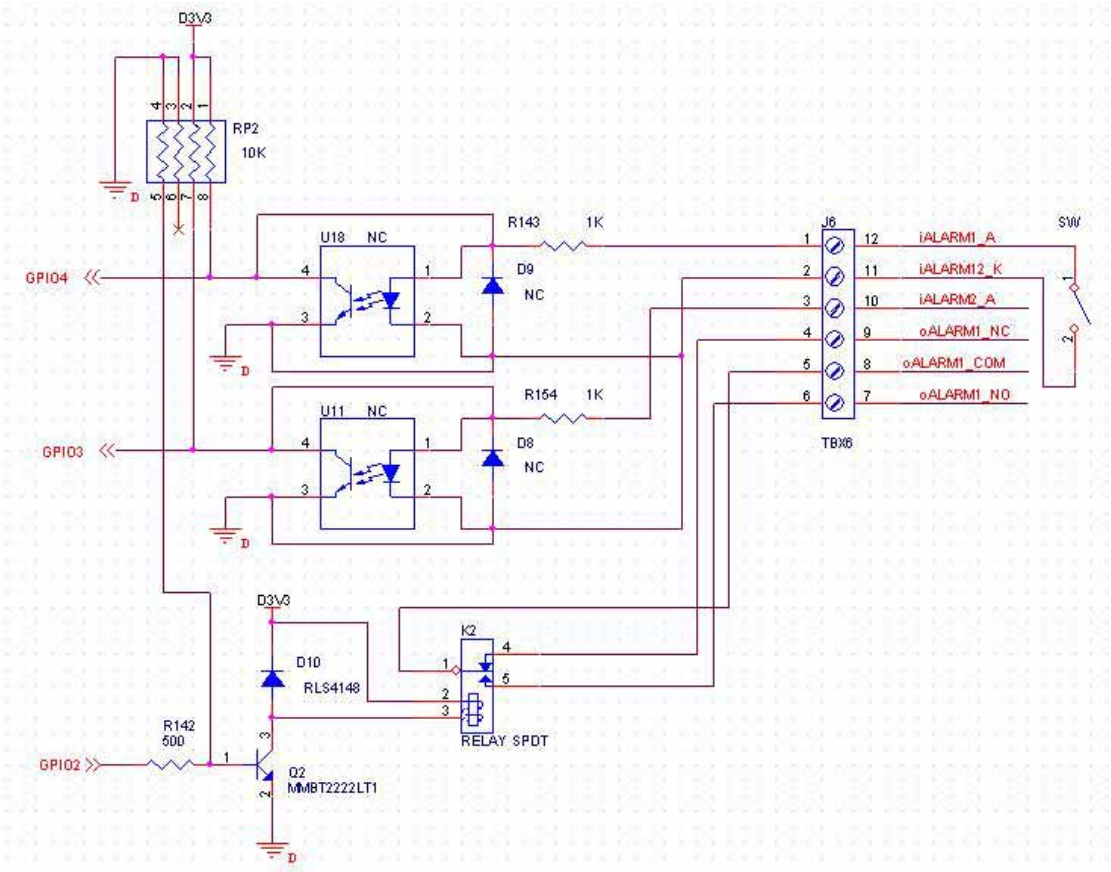
PTZ (Speed Dome)：

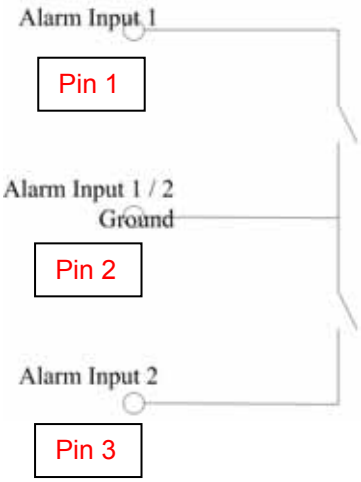
ALS-7721 can support the PTZ camera to install. Attach the control line to RS485 connecter first, and set up the analog camera. Please make reference to the chapter of **Hardware Installation** for the detailed installation description.



NOTE：
ALS-7721 support the two types protocol: Pelco P and Pelco D.

External Alarm I/O Circuit Diagram





Warning! The alarm will be triggered when alarm pin 1 & 2 are formed as a short circuit. Please do not connect the electric voltage or current into alarm input pin for the electronic current might burn the product.

Warning! The alarm will be triggered when alarm pin 2 & 3 are formed as a short circuit. Please do not connect the electric voltage or current into alarm input pin for the electronic current might burn the product.

Attention:

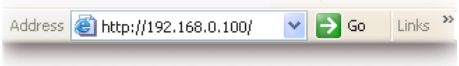
Where connecting of a low or high current loop to the external alarm input/output of the product is required, the wiring and connection shall be conducted by a qualified electrician. Incorrect wiring may bring about damage to the product fatal electric shock.

Direct connection of the external alarm input/output terminal to high-current equipment is not allowed and a customized repeat circuit might be required (provided by the customer) for some cases to isolate the terminal and the high-current equipment. Where the voltage/current of an external device exceeds the loading capability (5V) of the Alarm I/O, the product would be damaged seriously.

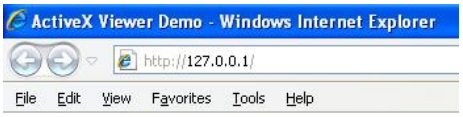
Appendix C: Change the Internet Explorer Settings

Change the security setting of IE browser to allow the ActiveX Control be plug-in to the IE browser.

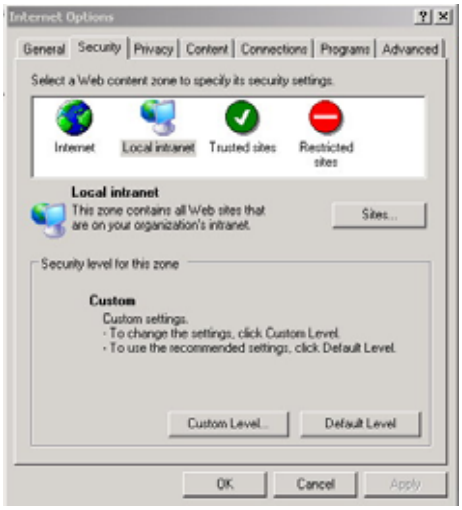
Open the IE browser from Desktop or State Menu.



Select the Tools → Internet Options → Security → Custom Level

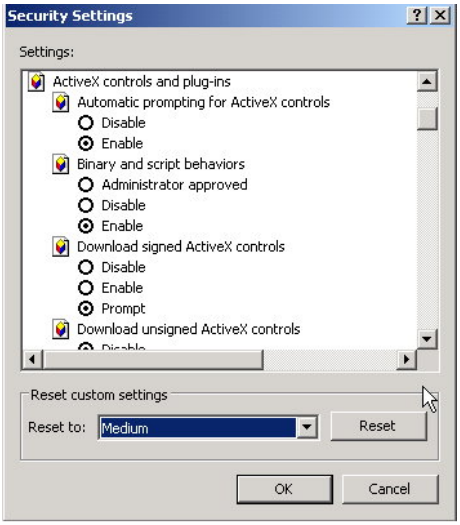


Select the Security bookmark then click the “Customer Level” to check the Security Level.



Make sure the security setting is “Medium”, and the commonly used default security level.

Click “OK” to save the parameter then quit the window. Please remember re-open the IE browser



Appendix D: Set up the Router setting with the video server

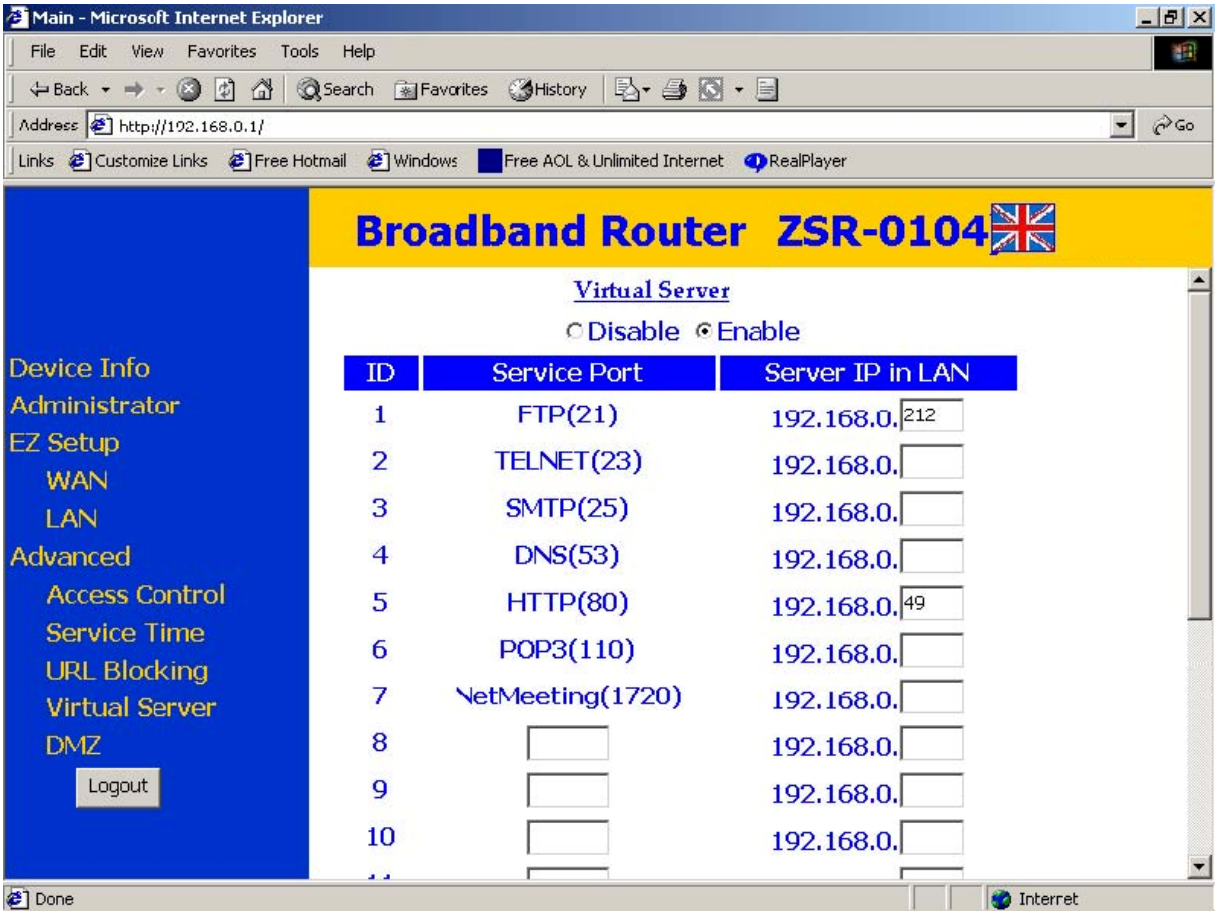
You can use DHCP when you want to use the camera on the Intranet (LAN). However, the IP must be set to fixed when you want to use the camera on a WAN. For this application, it is required to set up the function of the virtual server on the ADSL router. Follow the steps below to complete the setting:

1. Enter the camera setting page to set a fixed IP. (Refer to the “Network Setting”.) Ex.: 192.168.0.49

2. Enter the ADSL router main setting page. Ex.: Zonet ADSL router

3. Enter the Virtual Server setting page.
   a. Set “mapping of *HTTP Port (80)* to *192.168.0.49* ”.
   b. Restart ADSL router.

When completing the setting, you can operate the camera from the WAN IP Address via the ADSL router.

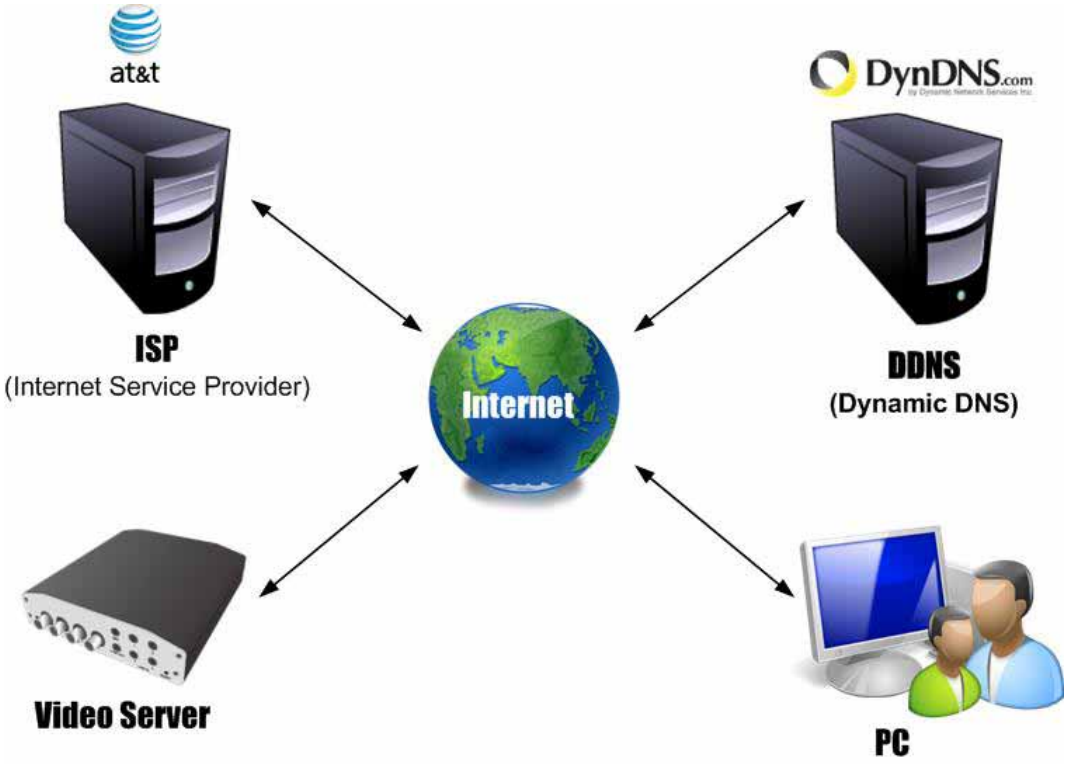


NOTE：
The virtual server setting screen is not the same for all ADSL routers. Refer to the manual of the ADSL router you purchased for more information about the setting.

Appendix E: DDNS Application

How to apply and setup the DDNS service?

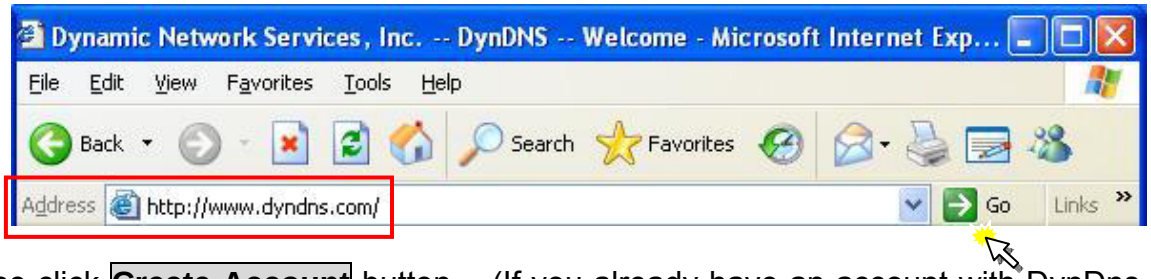
The DDNS (Dynamic DNS) is the network application service. The DDNS can help to solve the problem of dynamic IP change in network device. Through DDNS, you can assign a favorable website name to correspond with the device IP address (e.g.***: www.VideoServer.com***). After the setting is completed, you can connect the IP device through your assigned website name.



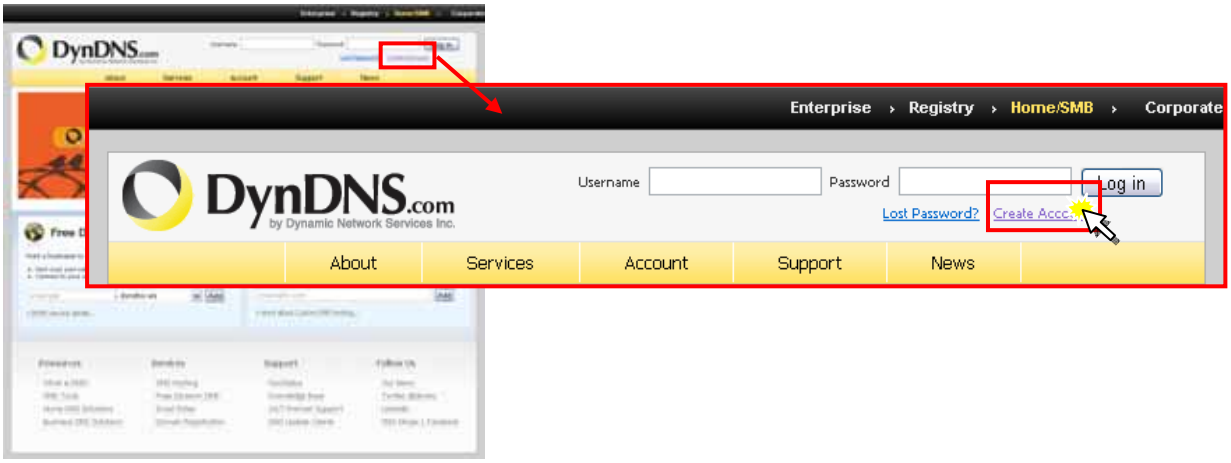
Firstly, please apply for an account from a DDNS supplier. These DDNS suppliers provide free services to the world's users. This chapter will demonstrate a step by step method of how to set up a DDNS account, the example we illustrate here is DynDNS. Please follow the illustration below:

NOTE：
You can find some free DDNS suppliers on Internet. For example: DynDNS, No-IP and Oray.

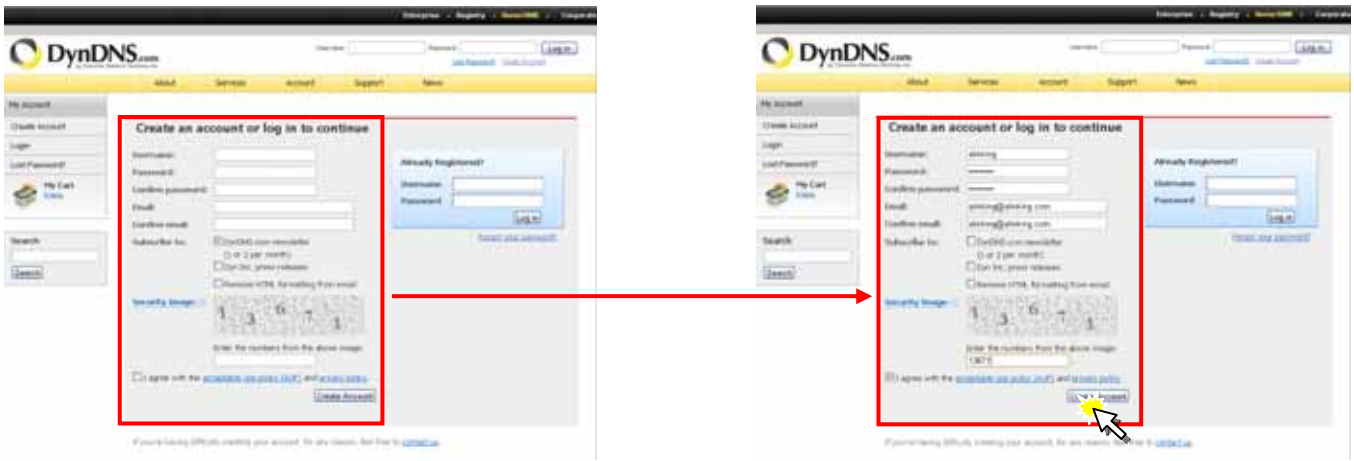
1. Please enter the website address of “DynDNS” (http://www.dyndns.com/) through Browser.



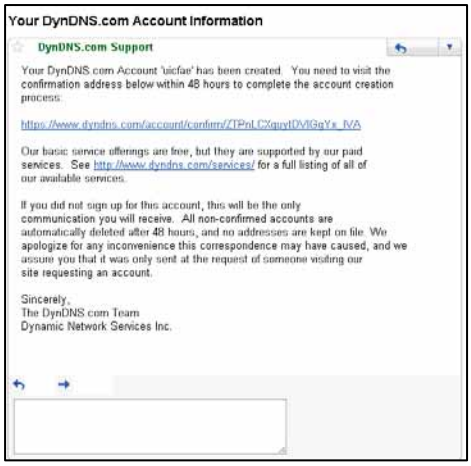
2. Please click **Create Account** button. (If you already have an account with DynDns.org, then you can skip step 2~9)

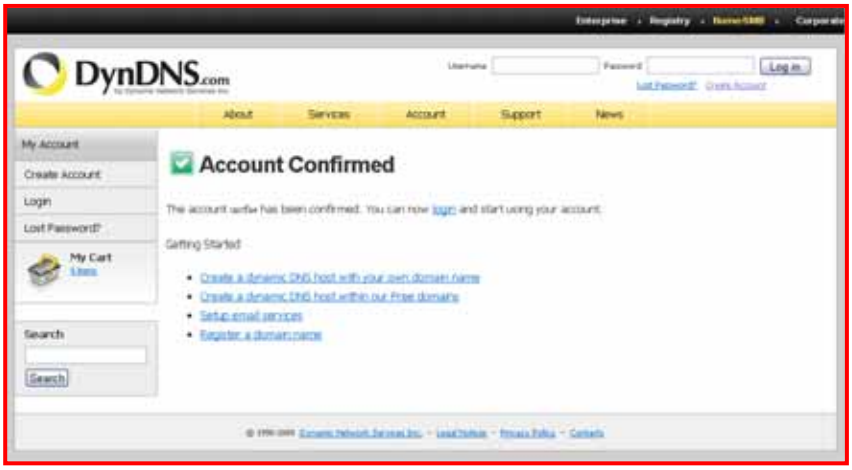


3. Please fill in all the required information in the table such as: **“Username”, “Password”, “Email” and “Security Image Number” etc.**. When you have finished, please select the “Agree Box” then click **Create Account**.

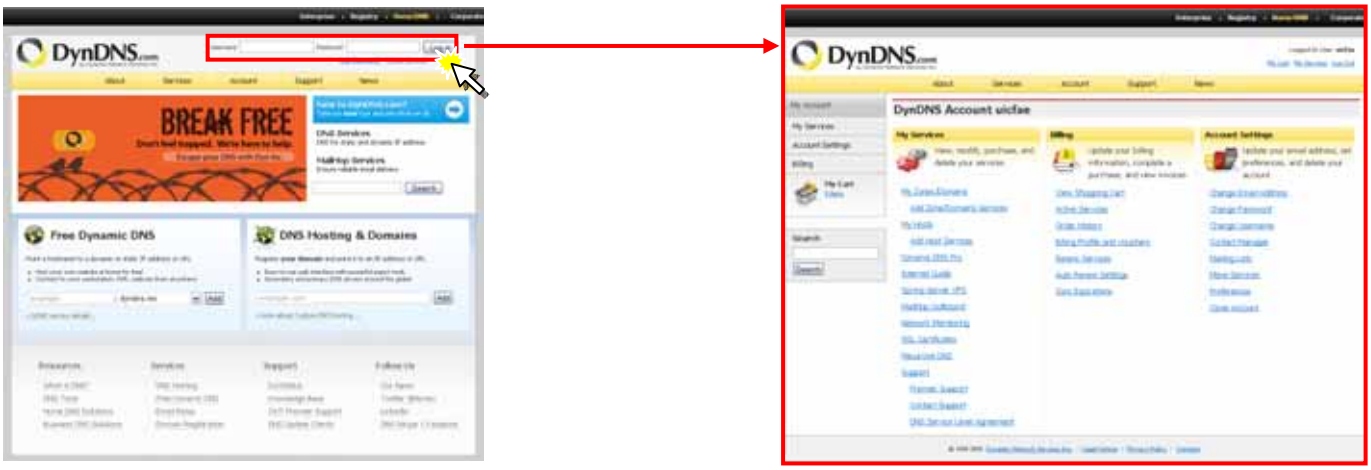


4. After click “Create Account” button, a confirmation letter will be sent to your mailbox. Please acknowledge the confirmation letter by clicking on the link provided in the mail to continue with the steps





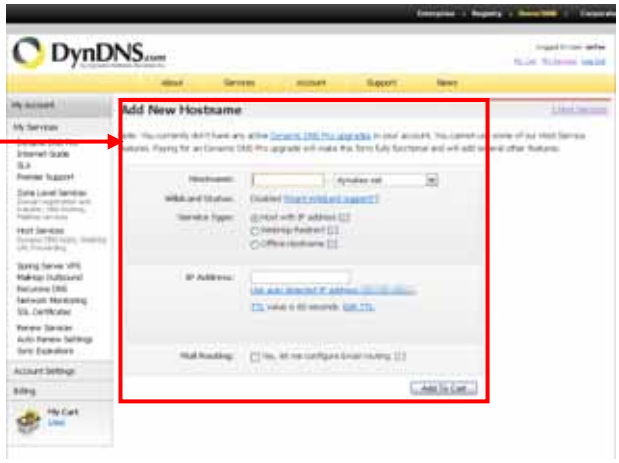
5. You can login to DynDns.org, please input the username and password on main webpage. And click “Service” button to set up the DDNS function.



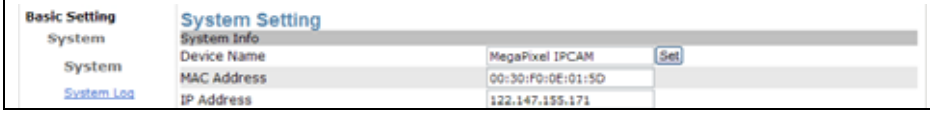
6. Please click **“Dynamic DNS”** icon then select **”Dynamic DNS Free”** service.

7. Click **Get Started** button to add the new Hostname.

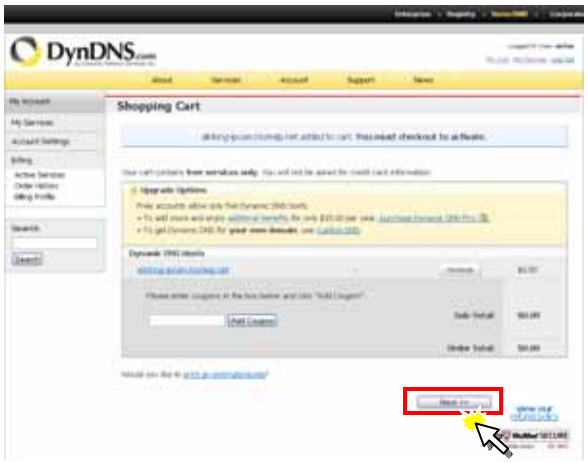
8. Set up the “Hostname” and “IP Address” by yourself. You can enter your favor domain name as your “Hostname”, and input correct “IP address”(e.g. the IP address need to input the real IP address from the video server, please see the **NOTE** illustration below). Finally, click “Add Host” to finish with the setting.



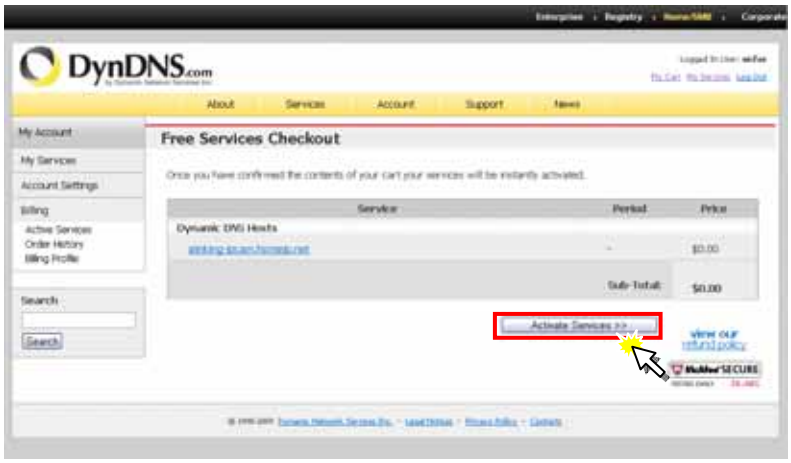
NOTE：
The IP almost appear after IP setting (PPPoE/DHCP/Fix IP). Click Setting > System > IP Address



9. After add new hostname, click **Next>>** to enter the next step.
(Note: as you are using **"Dynamic DNS Free"** service; so you can ignore the information of **"Shopping Cart"**.



10. Please click Activate Services button to enable DDNS service.

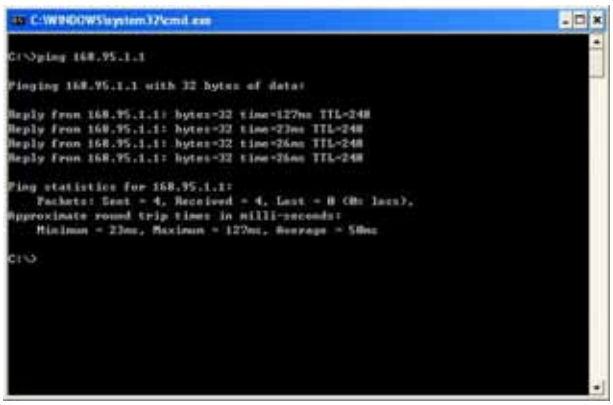


11. The completion of the registration page is shown below. You can now use the DDNS service to your devices.

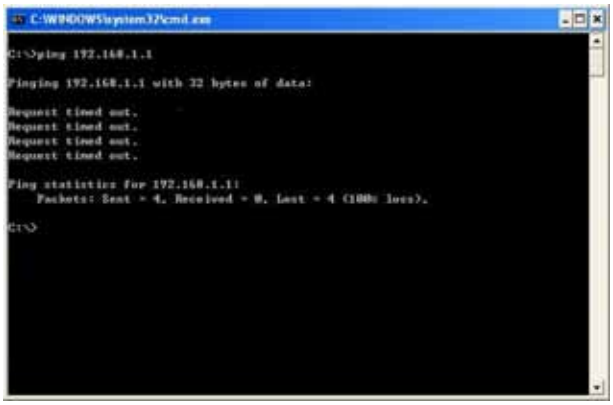
How to check if the DDNS service is successful?

1. If you can not connect the IP devices through the domain name, which you have set up, you can test the DDNS service on your PC.
2. Please open the “command mode” from **“Start Menu”**.
   Start Menu > Program > Accessories > Command mode
3. Input the command: c:\>ping (Your domain name e.g. www.VideoServer.com) [**ENTER**].

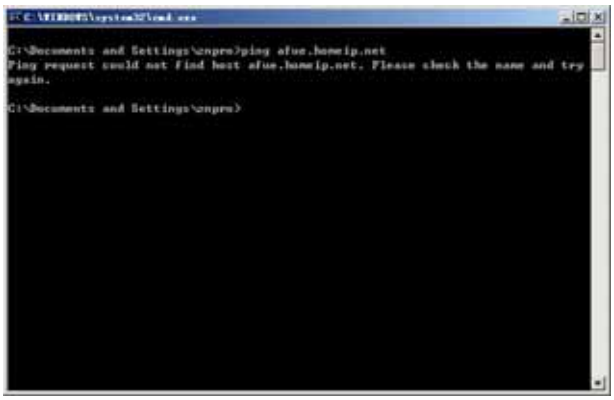
If the command mode displays “Reply from …….” On the screen, then your DDNS is working correctly.



4. If the command mode displays **“timed out”**. Then your DDNS is not working. Please double check your account information is entered correctly.
5.



6. If the command mode displays **“Ping request could not find host…”**. Then you need to re-visit DDNS website to confirm all the required information is correctly filled in. Alternatively, you can set up another account with start



Appendix F: Mobile Application

Our Video server can support the 3GPP(RTSP) connection through the mobile phone. Please check your ISP to provide the mobile networking service which working on your mobile phone first. And modify the setting of Video server to enable the application. Please see the detail illustration as below:

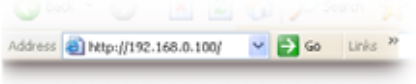
NOTE：
The 3GPP, which meaning the compression format, is not the same 3G. You can use the 2.5G/3G to connect to Internet through ISP.

Step1: Make sure the Video server is alive on Internet (WAN Environment)

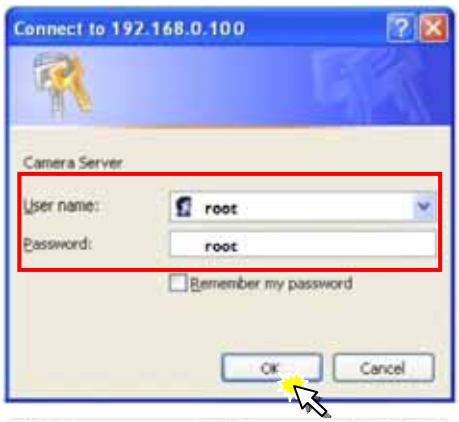
Try to remote connect Video server via public IP. If you use the Router, please check the Port Setting of ALS-7721 and the Virtual Server Setting of Router.

Step2: Check your Video server setting

Open the web browser then input the IP address from the video server.



Input the user name & password to Login



Click the “Setting” on right-upper to enter the setting mode.

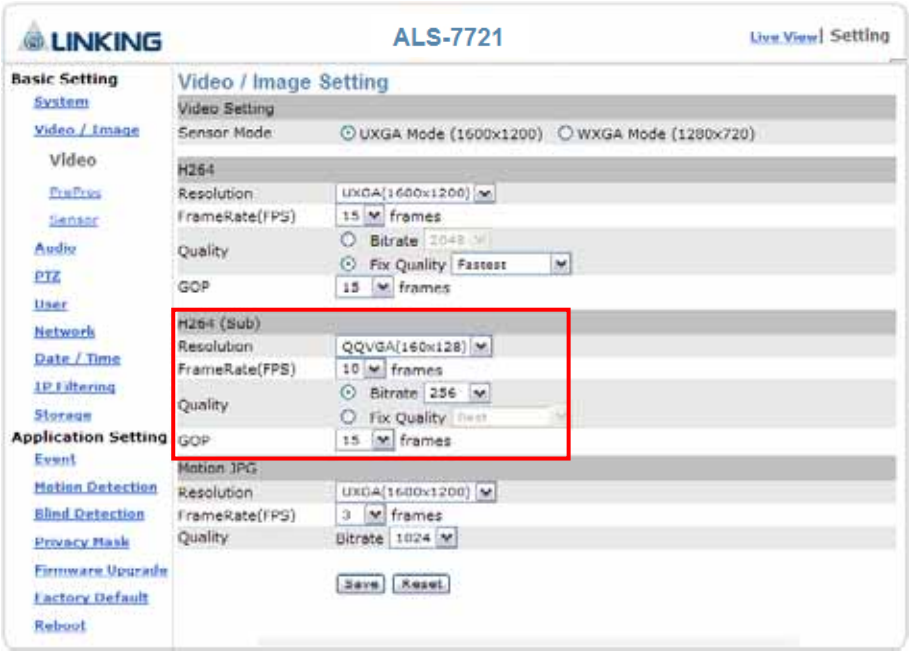
Step3: Check the RTSP streaming setting

H.264 Type

Click **"Video/Image"** of Basic Setting → **"Video"** →

Set up the sub streaming resolution (e.g. Please see the suggestion parameter as below picture) →

Click **Save** button to finish the setting.

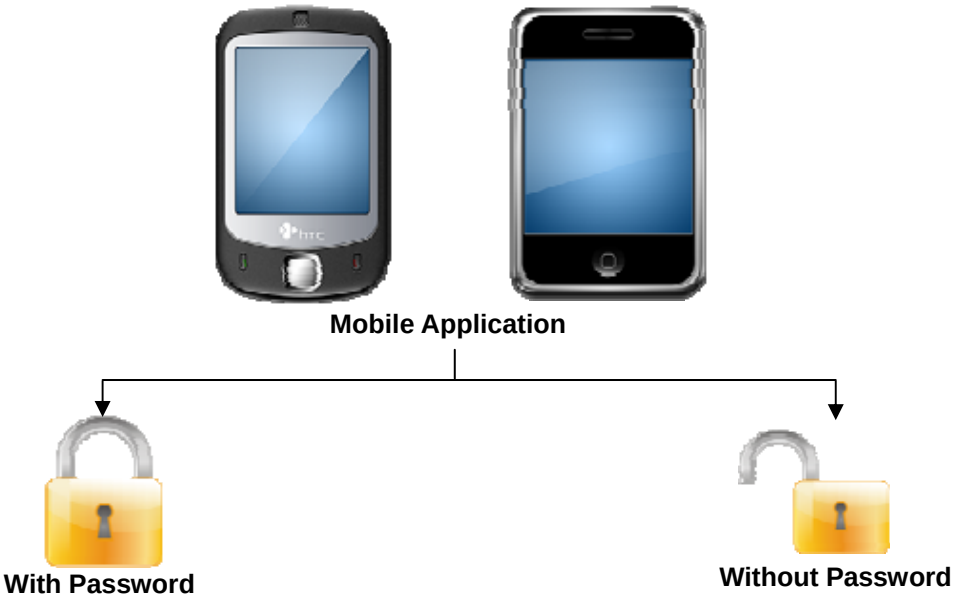


NOTE：

H.264 types remove the 3GPP selection, because it only fixed the resolution setting. And you need to input the streaming type on the URI link. The sub streaming can provide the QCIF resolution (176 x 122) to mobile application.

Step4: View limit Setting

According to the requirement, you can pass the live view limit. Please see the illustration as below.



■ **With password**

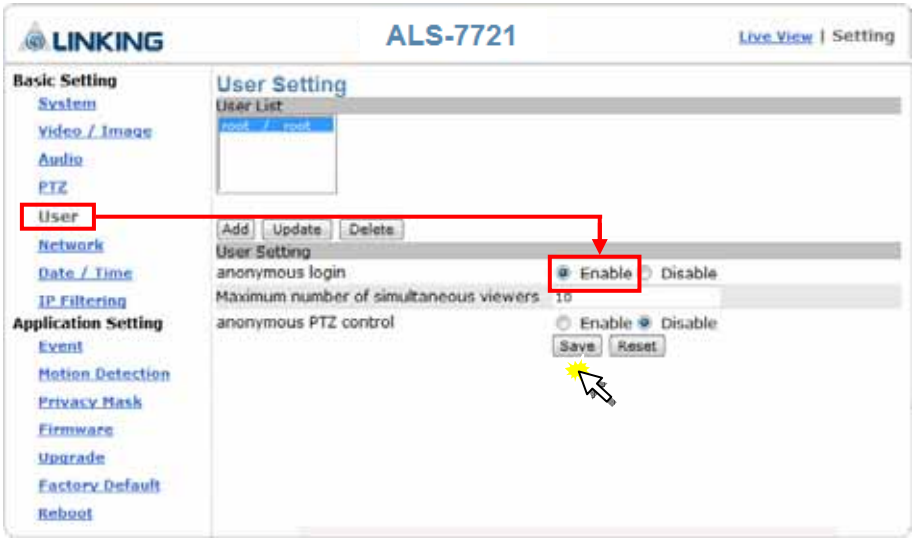
Don't need to enable the "anonymous login" function, but you need to input the account information every login. The application can keep the video server privacy.

e.g. Input rtsp://xxx.xxx.xxx.xxx:554/cam1/h264-2?user=root&pwd=root in mobile phone.

The "-2" mean the sub stream.

■ **Without password:**

Enable anonymous login.
Click the "User" of Basic Setting →
Click the "Enable" from anonymous login of User Setting →
Click the **Save** button to finish the setting.



e.g. Input rtsp://xxx.xxx.xxx.xxx:554/cam1/h.264-2 in mobile phone.

NOTE：
The video server can support 4 channels streaming to use it. Modify the cam number of URI link to change the channel. E.g. **Channel 2:** rtsp://xxx.xxx.xxx.xxx:554/cam2/h.264-2

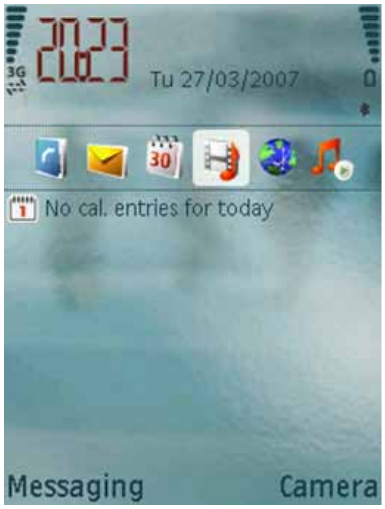
Step5: Try to connect Video server through the mobile phone
Check the mobile phone can support the streaming media player and internet service, and then see the example operation as below:

NOTE： Suggest using the wireless solution. It can provide the highest network speed and save the mobile network cost.

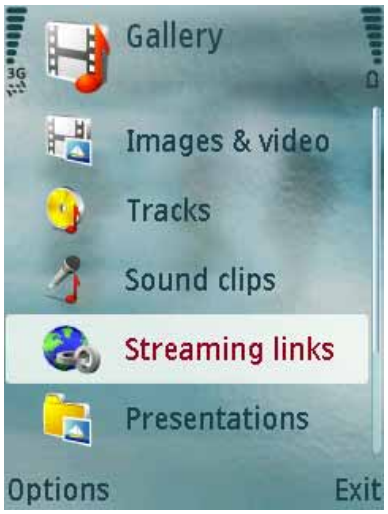
Symbain System

Example: Nokia N71. Follow these steps to set up the viewing function

1. Enter multimedia data from the main screen.



2. Select a streaming link



3. Add a new link.

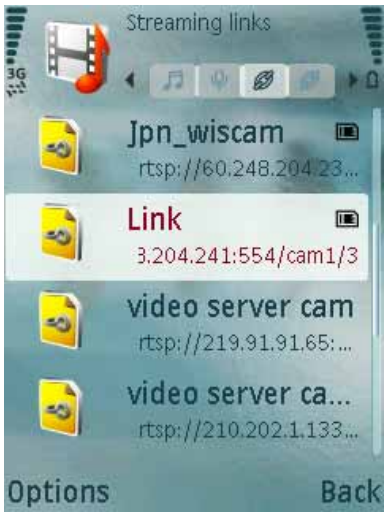
4. Enter the link name.

5. Enter the IP address of the camera
   e.g. (Without Password)
   rtsp://xxx.xxx.xxx.xxx:554/cam1/h264-2
   e.g. (With Password)
   rtsp://xxx.xxx.xxx.xxx:554/cam1/h264-2?user=root&pwd=root

6. Select OK to save the setting.

NOTE：
Some mobile phone can only support the without password application

7. Select this stream name of bookmark to proceed with linking



8. Select “Yes” to connect.

9. Connecting.

10. Loading the image

12. Show the video stream on the mobile screen.

NOTE：
If the software cannot receive the stream from the video server, please try to check the Internet setting of software is correctly.

iPhone System

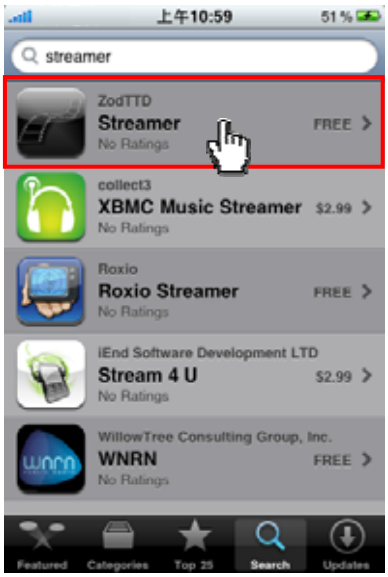
Example: iPhone 3GS. Follow these steps to set up the viewing function

1. Download and install the free video streaming software through iPhone(App Store) or iTune. (e.g. iPhone(App Store))

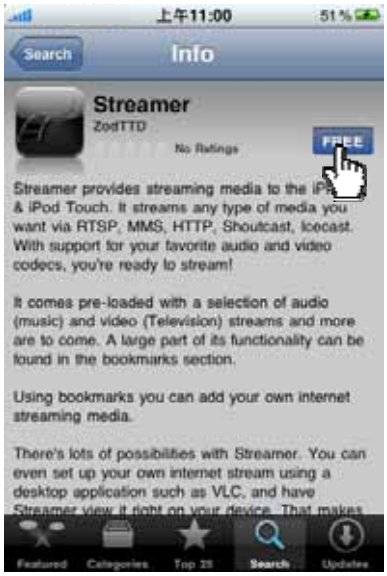
2. Tap “App Store” icon to open the software

3. Tap “Search” icon then input the **“Streamer”** to search the software.

4. Tap “Streamer” to enter the download page

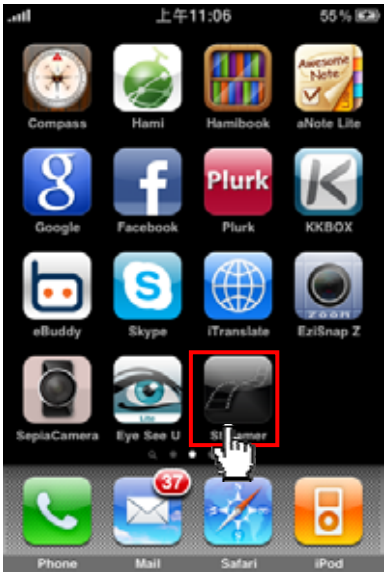


5. Tap **FREE** button to change the selection.

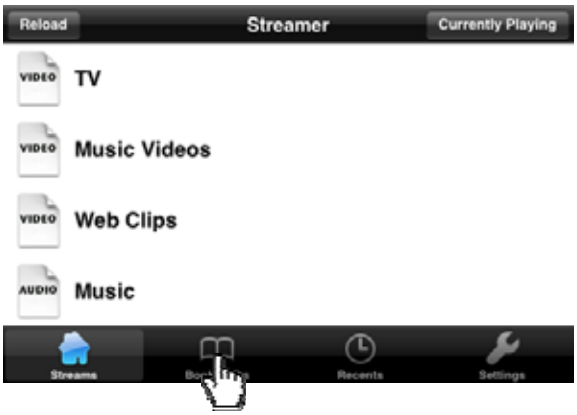


6. Tap **INSTALL** to install the software.

7. Go back the main screen then select **Steamer** icon to open the software



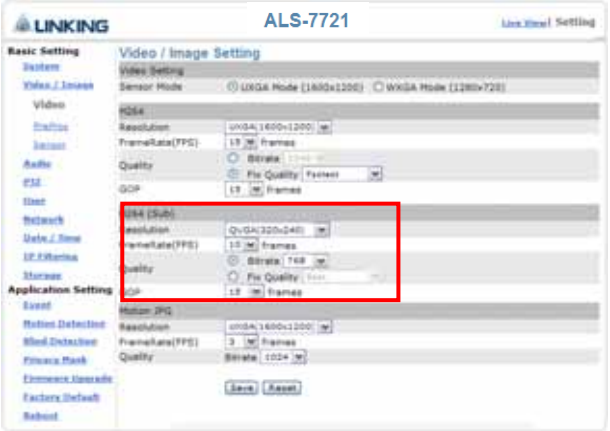
8. Tap “Bookmarks” icon



9. Tap “+” signal to add the bookmark.

10. Input your URI link of the video server (e.g. rtsp://xxx.xxx.xxx.xxx/cam1/mpeg4-1), and tap **Save** button to save the link.

NOTE：
The software can only support the Without Password mode.
The video server need to set more then QVGA(320 x 240) resolution.



11. Tap the link to connect to the video server

12. Show the video stream on the mobile screen

13. Tap the screen to display the detail information, and the APP can support the audio application.

NOTE：
If the software cannot receive the stream from the video server, please try to check the setting is correctly.

Appendix G: Support the Cellular / Mobile Phone List

Please suggest the list to buy the applicable cellular / Mobile Phone which to use.

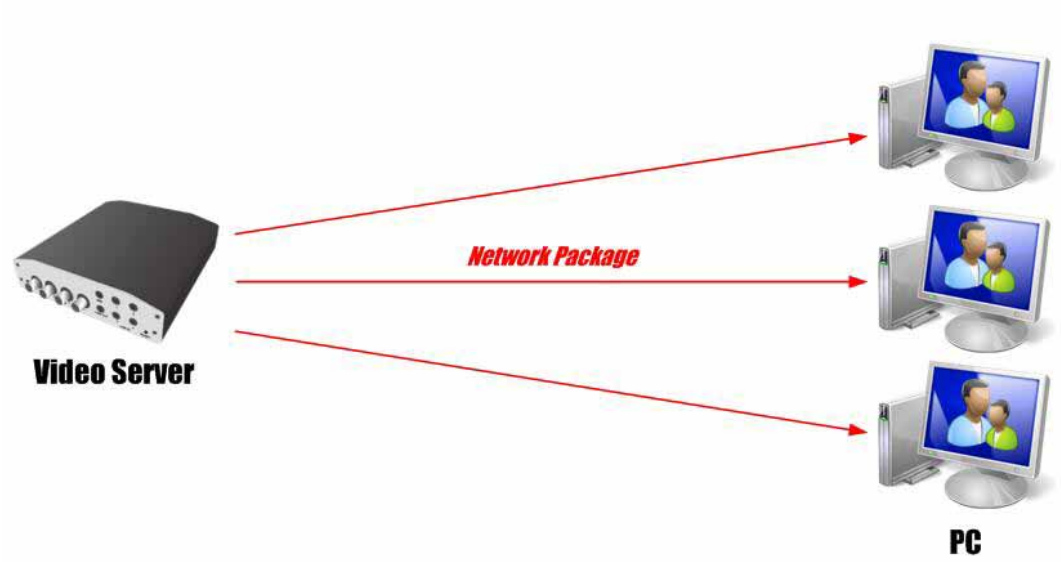
Brand	Type	Brand	Type
Nokia	6630 E61 N70 N73 N82 N93	Vibo	Win II
HTC	Touch Diamond2 Touch Viva Touch Cruise Touch HD Touch 3G Magic Hero	iPhone	3G 3GS

NOTE：
The application almost supports all cellular / mobile phone on the market. The list is the reference data for user.

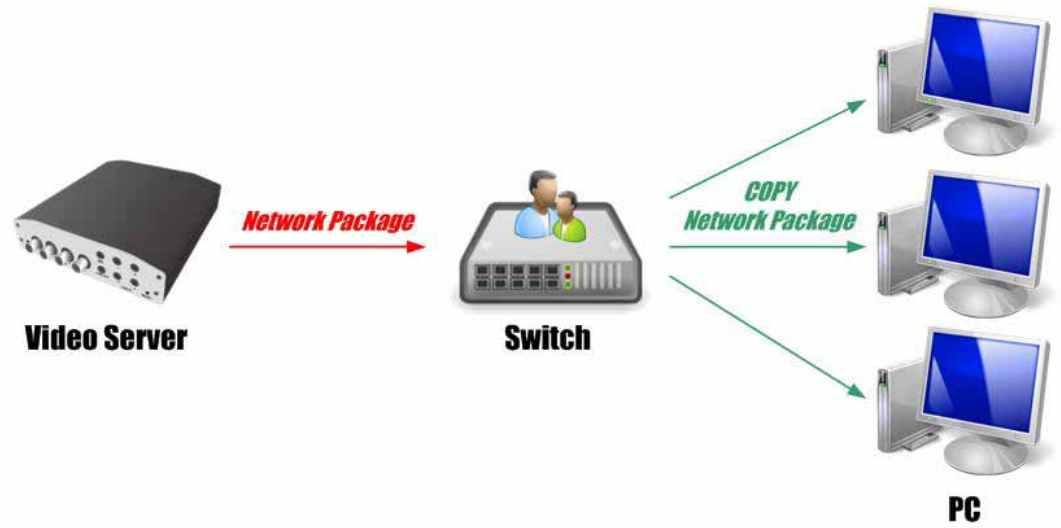
Appendix H: Multicast Application

The Multicast function is a technique for one-to-many communication over an IP infrastructure in a network. The PC can be given the network package after login the account, so the function can use one network package to copy many packages to PCs. It allows multiple people to watch video streaming without limitation on the number of users, but is only applicable in the LAN environment. The function must need to combine with the application of IGMP service (e.g. Layer 3 Switch.).

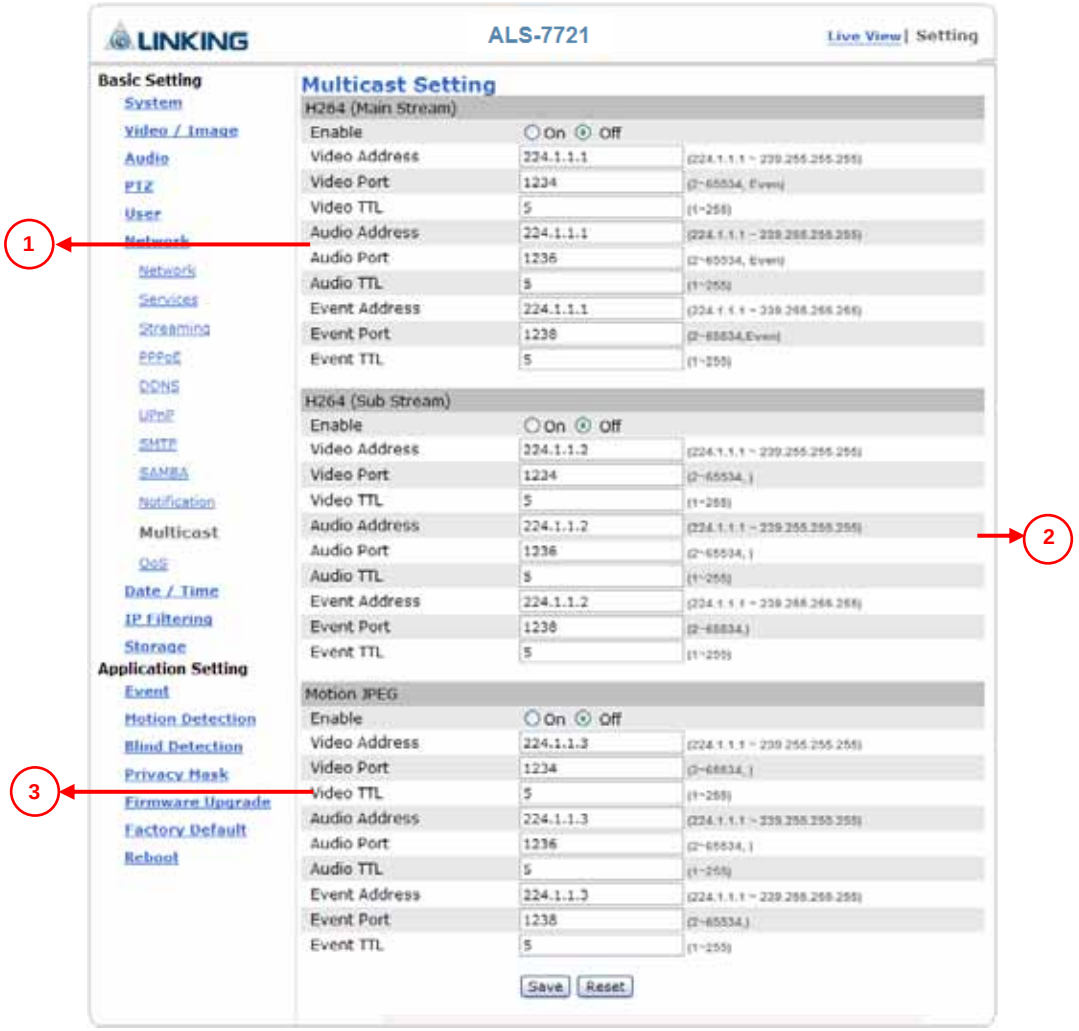
The Regular Mode: (Through TCP/UDP/HTTP)



The Multicast Mode: (Through Multicast)

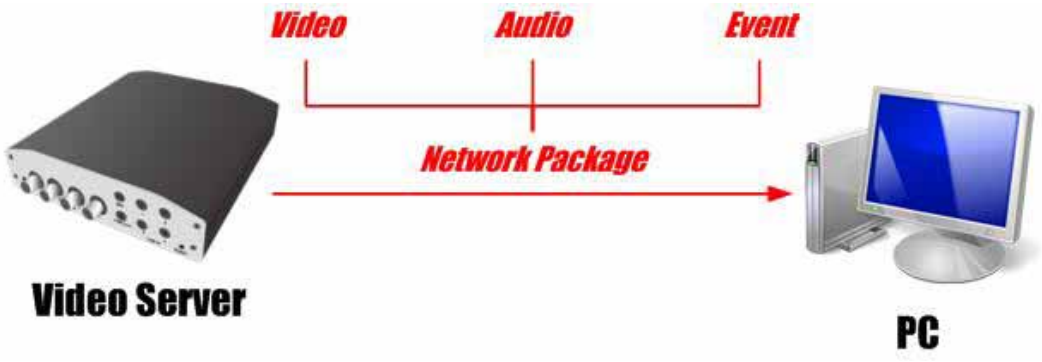


NOTE：
The function is not limit with the Layer 3 Switch, and you can also select the IGMP Server to use the application.



N.O.	Item	Illustration	Note
1	H264 (Main)	Display the multicast setting of H264 (Main)	
2	H264 (Sub)	Display the multicast setting of H264 (Sub)	
3	Motion JPEG	Display the multicast setting of Motion JPEG	

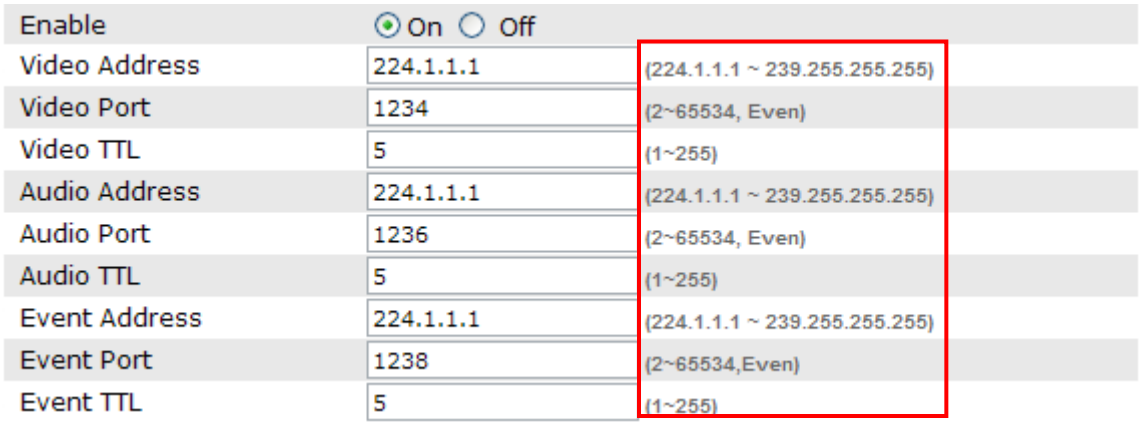
The function will display the different streaming mode from IP device. No matter how many modes to display, the content is the same setting to the user. There are three kinds of package type for User: Video, Audio and Event. Please see the detail setting as below:



NOTE：
The function can only enable one streaming to use the application.

H264 (Main)

The function has some limit parameter, so please follow our limit parameter to set up it. All restrictions exist in the rear of each option.



NOTE：
Suggest using the default parameter to use the multicast function. Please make reference to the chapter of **Basic Setting > Network > Multicast** for further detailed description.

Enable
Click On or Off selection to enable or disable the function.

Video Address
Set up the IP address to transfer the Video package. The default setting is 224.1.1.1.

Video Port
Set up the Port to transfer the Video package. The default setting is 1234.

Video TTL
Set up the TTL time to transfer the Video package. The default setting is 5

Audio Address
Set up the IP address to transfer the Audio package. The default setting is 224.1.1.1

Audio Port
Set up the Port to transfer the Audio package. The default setting is 1236.

Audio TTL
Set up the TTL time to transfer the Audio package. The default setting is 5

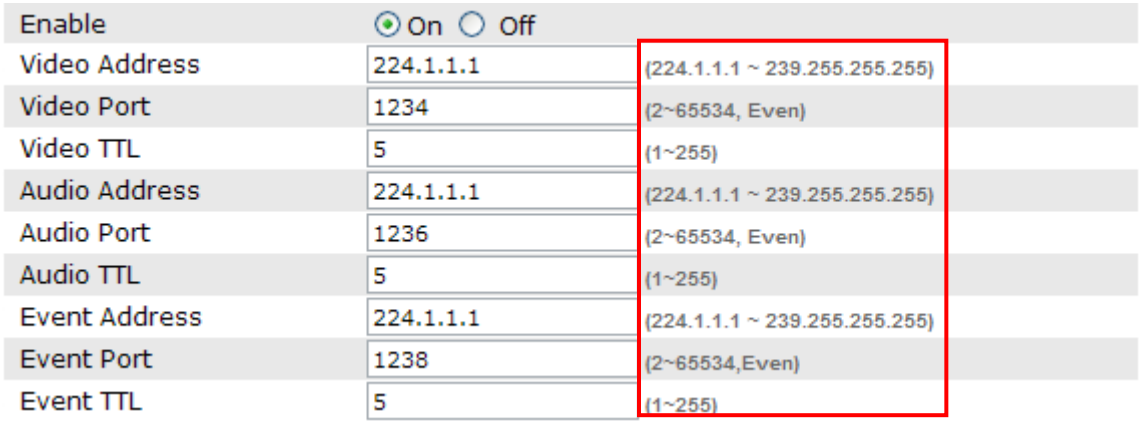
Event Address
Set up the IP address to transfer the Event package. The default setting is 224.1.1.1

Event Port
Set up the Port to transfer the Event package. The default setting is 1238.

Event TTL
Set up the TTL time to transfer the Event package. The default setting is 5

H264 (Sub)

The setting is the same with the H264 (Sub).



NOTE：
Suggest using the default parameter to use the multicast function. Please make reference to the chapter of **Basic Setting > Network > Multicast** for further detailed description.

Enable
Click On or Off selection to enable or disable the function.

Video Address
Set up the IP address to transfer the Video package. The default setting is 224.1.1.2.

Video Port
Set up the Port to transfer the Video package. The default setting is 1234.

Video TTL
Set up the TTL time to transfer the Video package. The default setting is 5

Audio Address
Set up the IP address to transfer the Audio package. The default setting is 224.1.1.2

Audio Port
Set up the Port to transfer the Audio package. The default setting is 1236.

Audio TTL
Set up the TTL time to transfer the Audio package. The default setting is 5

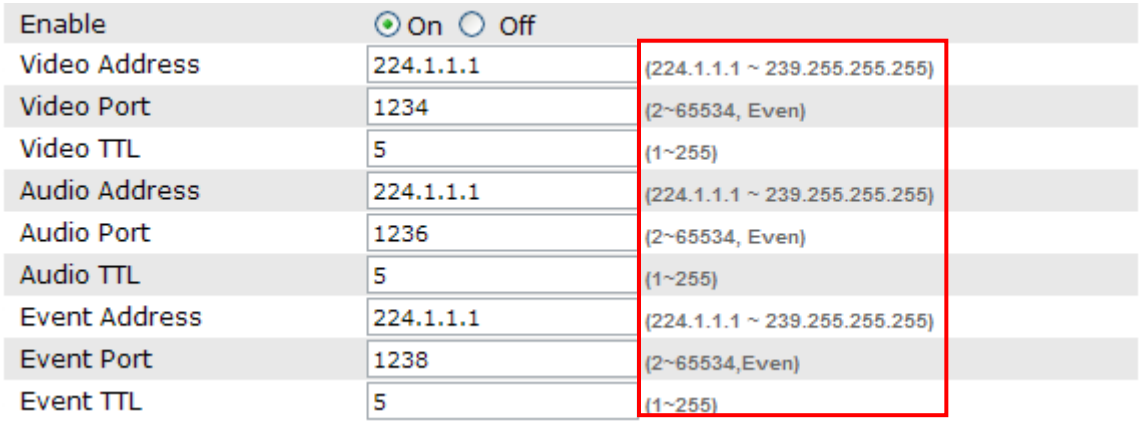
Event Address
Set up the IP address to transfer the Event package. The default setting is 224.1.1.2

Event Port
Set up the Port to transfer the Event package. The default setting is 1238.

Event TTL
Set up the TTL time to transfer the Event package. The default setting is 5

Motion JPEG

The setting is the same with the MJPEG.



NOTE：
Suggest using the default parameter to use the multicast function. Please make reference to the chapter of **Basic Setting > Network > Multicast** for further detailed description.

Enable
Click On or Off selection to enable or disable the function.

Video Address
Set up the IP address to transfer the Video package. The default setting is 224.1.1.3

Video Port
Set up the Port to transfer the Video package. The default setting is 1234.

Video TTL
Set up the TTL time to transfer the Video package. The default setting is 5

Audio Address
Set up the IP address to transfer the Audio package. The default setting is 224.1.1.3

Audio Port
Set up the Port to transfer the Audio package. The default setting is 1236.

Audio TTL
Set up the TTL time to transfer the Audio package. The default setting is 5

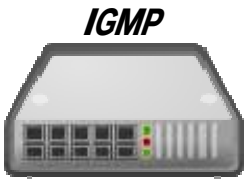
Event Address
Set up the IP address to transfer the Event package. The default setting is 224.1.1.3

Event Port
Set up the Port to transfer the Event package. The default setting is 1238.

Event TTL
Set up the TTL time to transfer the Event package. The default setting is 5

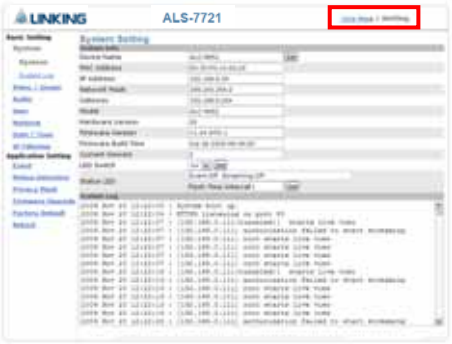
Please see the detailed steps to **Set up the Multicast function** as below:

1. First, check the LAN environment has the device of IGMP service.



2. Enter the device then enable the service.

3. Login the video server then enter the Setting mode.



4. Click **Multicast** button from Network.

5. According to the requirement, select the streaming type to enable the function.

6. Click **On** button from Enable Selection to enable the Multicast function.

7. Go back the Live View Mode then click the pull-down menu of Stream to select the Multicast

8. Wait a 5~10 sec to re-display the live image via Multicast

NOTE：
Please check the firewall and antivirus setting about IGMP to avoid the function fail.

Appendix I: Troubleshooting and FAQs

Question	Answer and Solution
Function	
What encoder and decoder are used by the camera for sounds and images?	The camera uses MJPEG or H264 compression technology to provide quality images. MJPEG is a standard image compression technology applicable to different browsers without the need to install additional software. H264 is a next-generation image compression standard and can provide high image quality at low bandwidth. The sound decoder uses PCM (Stereo, 16bit, 8kHz) compression technology.
How many users are allowed to view the camera simultaneously?	The maximum number of viewers depends on the bandwidth of the client accessing the camera. About 5~6Mbps are used to process data of the camera, so the maximum number of viewers changes in proportion to FPS and the resolution of the image. Obviously, the higher the number of viewers, the lower the performances at each client end.
Is it possible to catch the image from the camera in a real-time manner?	Yes, you can use the snapshot function from the main control page.
Camera Installation	
Can the camera be used outdoors?	The camera is not waterproof, so a special waterproof cover must be available for outdoor use. Please note that the waterproof cover may affect the built-in pickup function of the camera.
Link LED does not light up.	• Check that the attached standard transformer is not damaged. Plug the power cable and reboot the machine. • If the problem remains, contact your dealer for help.
What network cable is used for the camera?	The camera uses a 10 or 100 Base-T Category 5 UTP network cable.
How to install and operate the camera behind a firewall?	If you have a firewall in your network environment, please select HTTP mode (Port80). Generally the port 80 is always open for the browser to access the Internet.
What are the username and password for the first use and after reset to factory default?	Username = **root** Password= **root** Please change your password immediately after entering the system to ensure information security.
I forgot the username and password I used for the setting. What should I do?	Please proceed as follows: **1.** Hold the Reset button for 4 seconds after booting to reset the password to preset. **2.** Change the username and the password.
I forgot the IP address of the camera. What should I do?	Use IP Finder to locate the IP address of the camera. Please connect the camera and the PC on which the IP finder is executed to the same hub.
IP Finder cannot find the camera.	• When the camera still can't be located over 1 minute, re-activate the camera. • Do not connect the camera to more than one router. The IP Finder will not be able to detect the camera. • If the IP of PC on which the IP Finder is executed is not correctly set, the IP Finder will not be able to locate the camera. Please confirm that the IP address has been properly set. • The anti-virus applications on the PC or the firewall might block the IP Finder from execution. If you cannot execute the IP Finder, please disable your anti-virus applications or firewall.
Internet Explorer does not display the camera screen correctly.	Please be sure that the version of your Internet Explorer is 6.0 or later. Should you have any difficulties, please log on the Microsoft website to update your browser. Microsoft website: http://www.microsoft.com/windows/ie.

IP Finder cannot store network parameters.	• Do not use spaces. Use underline "_" or dash "-". • Your connection might have problems. Please ensure that the network parameters and the camera connection are correctly set.
Access to Camera	
I cannot enter the login screen and camera page from Internet Explorer. What should I do?	• The IP address of the camera is possibly being used by another PC or device. Please disconnect the network cable from the camera and execute PING to confirm if the IP address has been used. • It is possibly due to the network cable. Please use the cross-line network cable to connect the PC and the camera, and see if the log-in screen appears. • Be sure that the network connection and the settings are properly configured. • Be sure to enter correct IP address in the Internet Explorer. If you use dynamic IP address, the address might have been changed after your last check. • Internet traffic might slow down the webpage access. Please wait. • Be sure that you are using http port. The default setting is Port 80. It will be converted to the private camera IP address. • The port assigned for your camera might not able to access the Internet. Contact your ISP to acquire a usable port. • The proxy server might be blocking you from connecting to the camera. Do not set the proxy server. • Please be sure that the default gateway address is correct. • Your router might need Port conversion. Refer to the user manual of your router for details. • The package filtering function of the router might have blocked the access to the external Internet. Refer to the user manual of your router for details. • If you are using DDNS, please remember to set the default gateway and server address. • If none of the procedures above is working, please reset to the factory default values and re-install. • If the problem still persists, there might be some problems with the product. Contact the dealer who sold you the product for more help.
No image appears on the main control screen.	• When using PC to connect to the camera for the first time, a security warning window will tell you that you need to download the ActiveX control. When you are using Windows 2000 or Windows XP, you might need a properly- authorized user account to install the application • Network traffic might slow down the video streams. If the video is extremely slow, select a lower resolution for a lower bandwidth requirement.
Check whether the Active X control of the camera has been installed in your computer.	Select C:\Windows\Downloaded Program Files to check if the file "**Media Viewer Class" is registered**. The status bar should indicate the file has been installed. If you do not see this file, be sure that your Internet Explorer security is properly set (the default value is moderate). Re-connect to the camera main page and download the file again. Incomplete download or installation of the camera ActiveX control is the major reason for this problem. Check the security setting of your Internet Explorer. Close and re-open Internet Explorer, and enter the main page to see if you can log in.
Internet Explorer displays the following message: Downloading the ActiveX control is prohibited under the current security setting."	Change the IE security setting to allow downloading unsigned ActiveX control. IE→Tools→Internet Options→Security→Custom Level. Change "Inactive" to "Tips" for the ActiveX control if required.
The camera can operate only in the LAN rather in the Internet environment.	• A firewall mechanism might have been activated. Check the setting of your system or ask your network administrator. To access the camera from the Internet, you may need to change the setting of the firewall. • Make sure that your camera does not conflict with other servers on the same LAN.

	• Check the router and make sure that its setting allows it to access your camera from the Internet.
The number of frames transmitted are less than the defined value.	• Congestion of the network or objects of the image may affect the number of frames transmitted. The number of frames may be less than the defined value when they are transmitted via a congested network. • The number of frames transmitted may become less when multiple users are viewing the video stream. • The network hub might be another reason for this problem, especially when multiple camera video streams are viewed simultaneously.
When the audit function is activated, the video streaming area becomes black or the transmission becomes slower.	• When you connect your PC to the camera, no sufficient bandwidth is available to support more frames with the current resolution of video streams. Reduce the resolution to QCIF(176x144) or CIF (320x240) and deactivate the audio function. • The audio signal needs 32 to 64 kbps of your bandwidth. You can deactivate the audio function to improve the image quality. Your Internet service may have not sufficient bandwidth to support audio transmission.
Images cannot be transmitted via e-mail or FTP.	• Make sure the IP address of the gateway and domain server (DNS) have been defined correctly. • Where FTP still fails, contact your ISP or network administrator to check the FTP server.
I can't control the camera to move up, down, right, left or to the center or preset point.	• When communication to the camera stops, click **"Refresh"** on your IE browser to refresh the transmission. • It might be that other users are controlling the movement of the camera. • The horizontal/vertical movement of the camera has reached its limit. • The horizontal/vertical remote control option of the camera might have been deselected.
I can't control the camera to move up, down, right, or left smoothly.	Delay might occur when you are accessing a video stream and remotely moving the camera horizontally. Where significant delay is identified when you move the camera horizontally or vertically deactivate the audio streams and/or reduce the size of the video stream...
Camera Image Quality	
Camera has a problem focusing.	• The lens might be contaminated with dust, fingerprints, or other dirt. Use a special cleaning cloth to clean the lens or adjust the focus manually. • Focusing might be impossible in some cases. If the object is too close to the lens, more it away from your camera.
Color of the video stream is too deep or light.	• Please confirm that the image your are watching has the best quality. Adjust the setting of your display card (color quality) to at least 16 bits (24 bits or more are recommended). • Incorrect camera video setting. You may need to adjust some parameters, such as brightness, contrast, color, and saturation.
Video stream flashes.	• Incorrect power cord frequency may cause flashing of the image. Confirm that your camera uses NTSC or PAL system. • The image flashes if the objects are black. In this case, adjust the illumination brighter around your camera.
This is noise problem during transmission of the image.	Noise may be produced if you install your camera at a very dark place. Adjust the illumination around your camera.
Others	
How to reboot my camera?	If you only need to re-boot the system and don't want to change any setting, enter the Setting page and select the Reboot option at the bottom of the screen. The system will reboot automatically.
I can't replay recorded files.	Confirm that you have installed Microsoft®'s DirectX 9.0 or above and use Windows Media Player 9 or above.